VOL. XLVI. No. 6 JUNE 1961

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1/3



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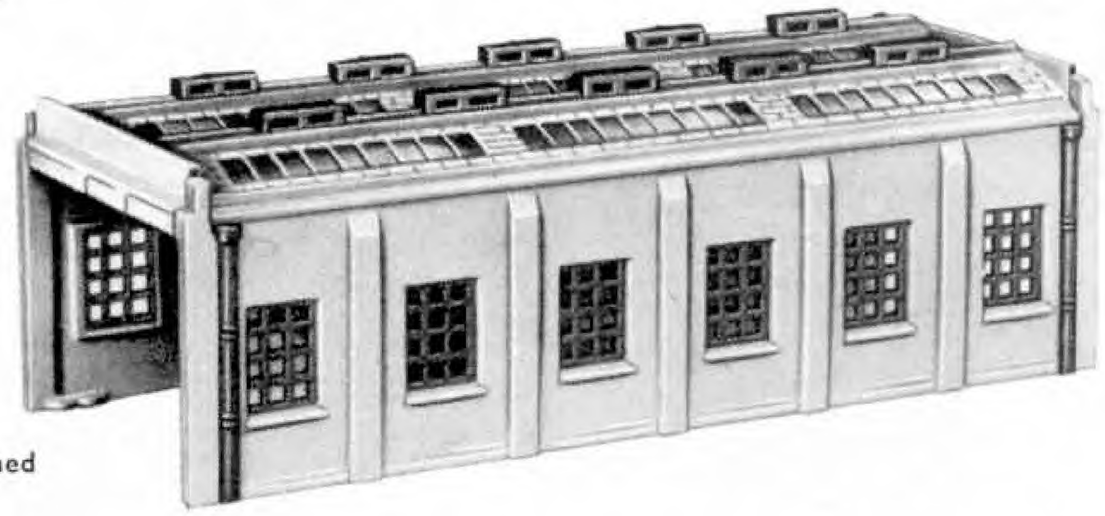
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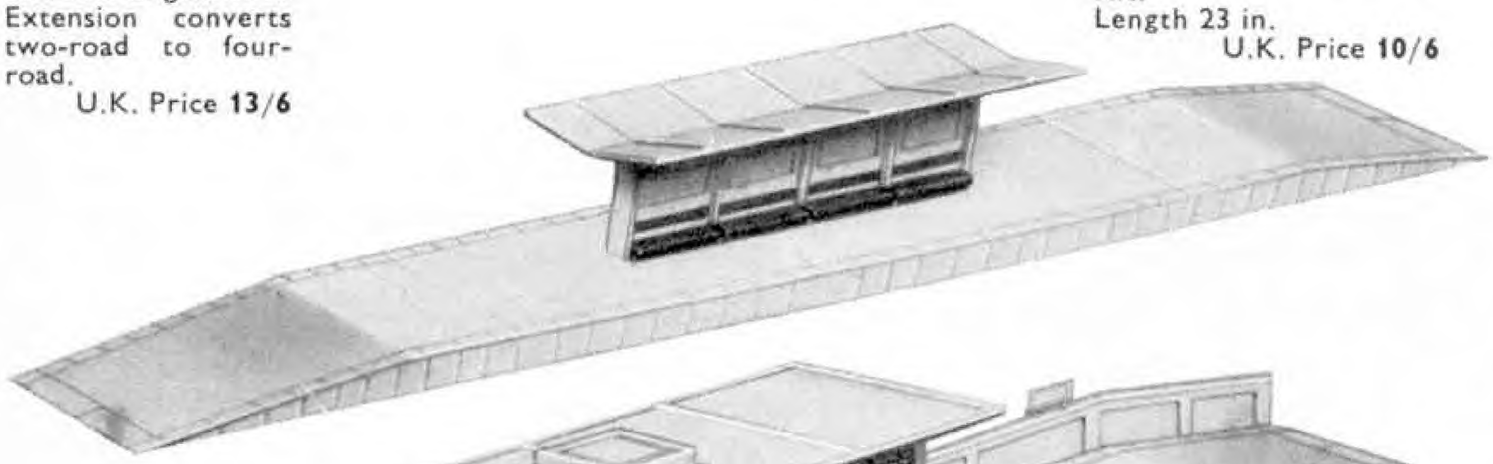
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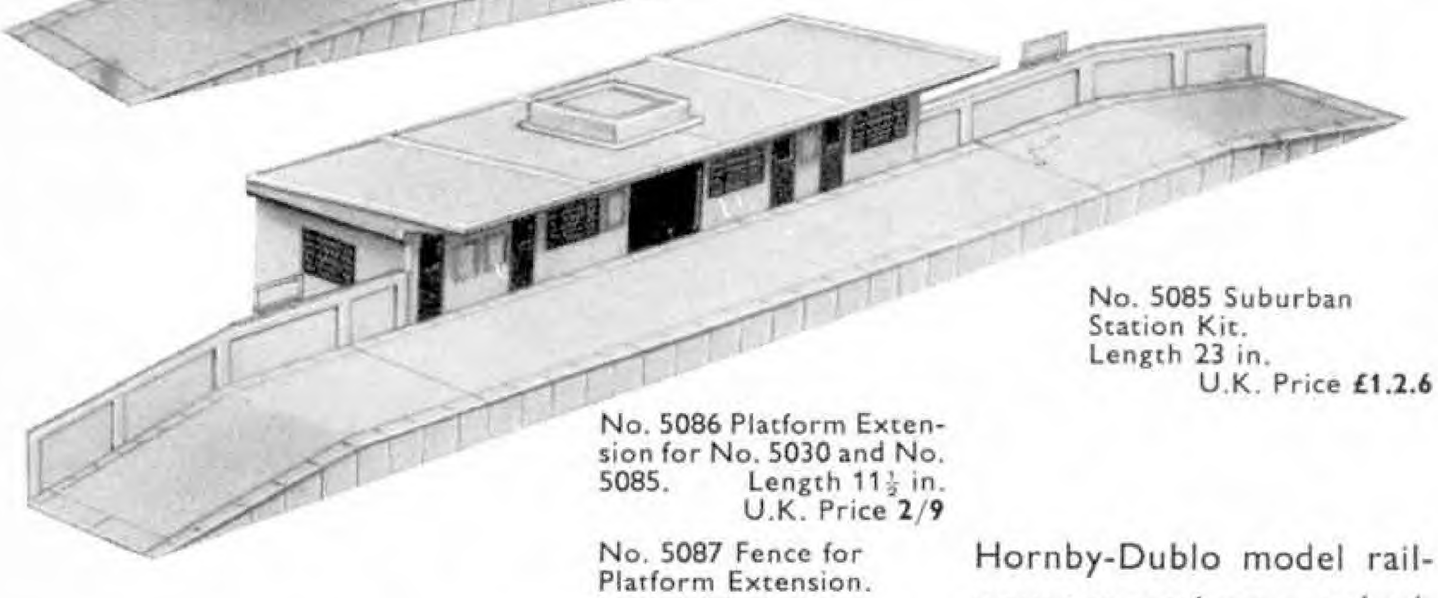


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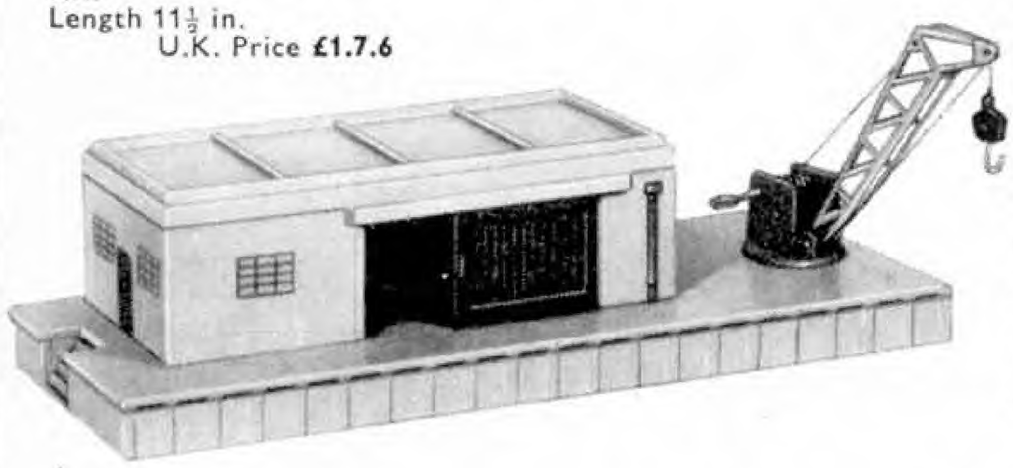


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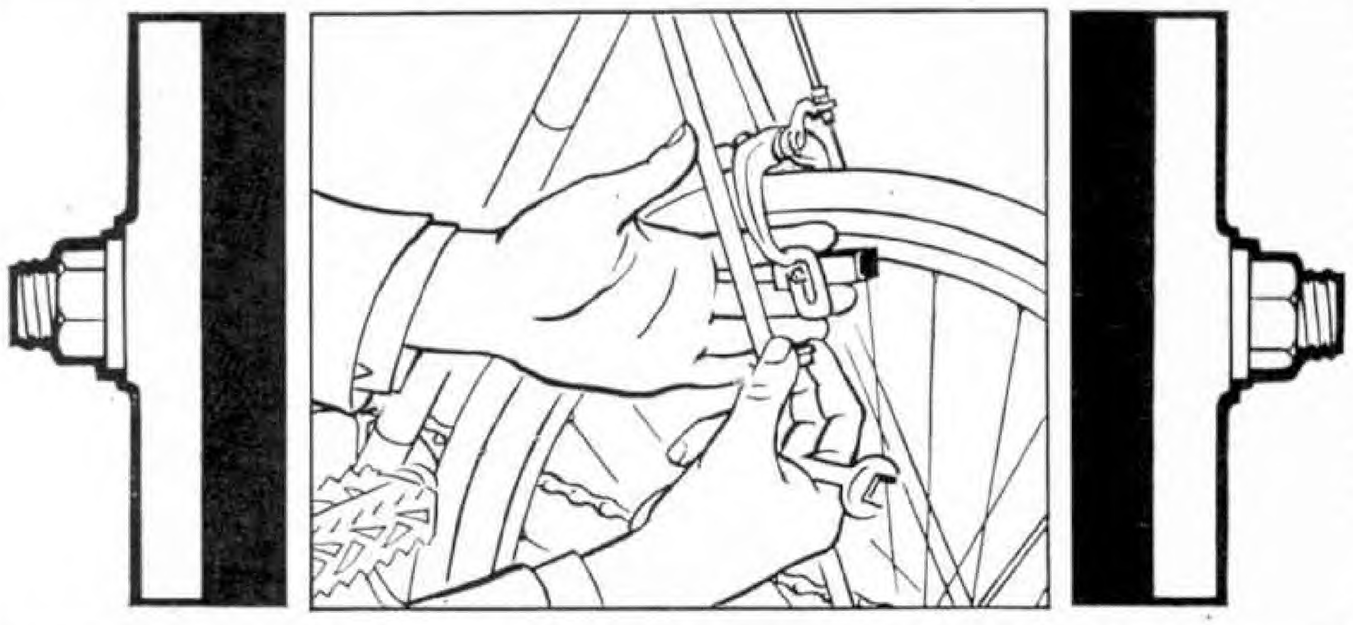
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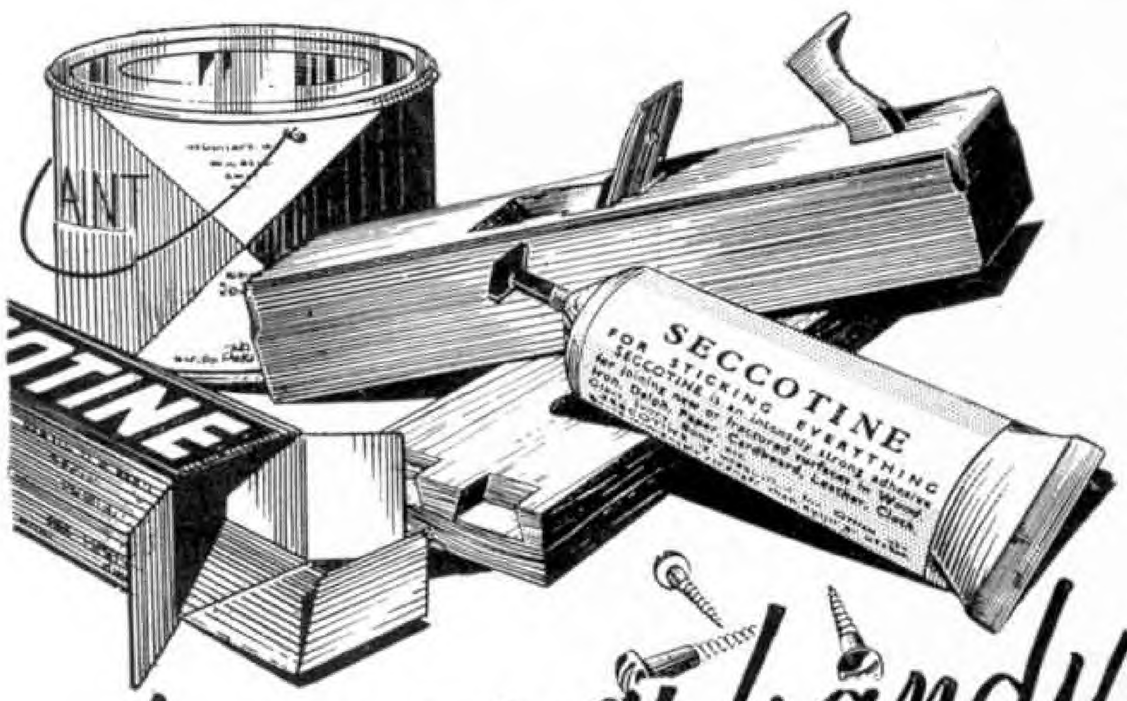
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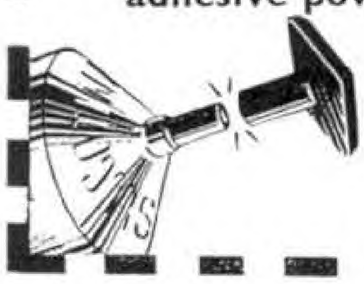
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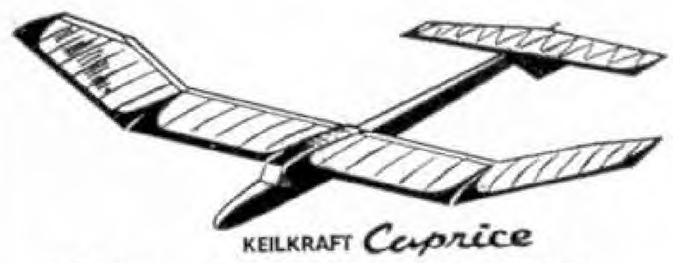
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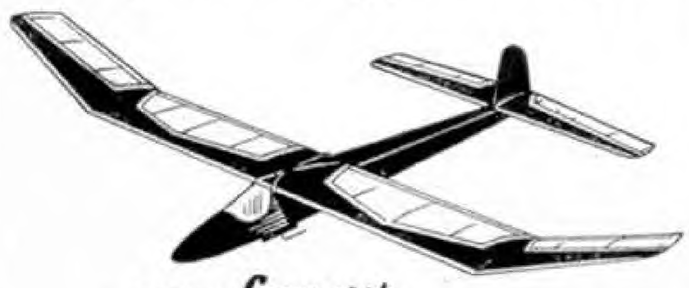
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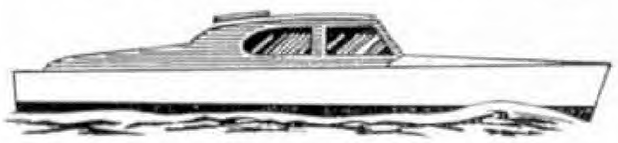
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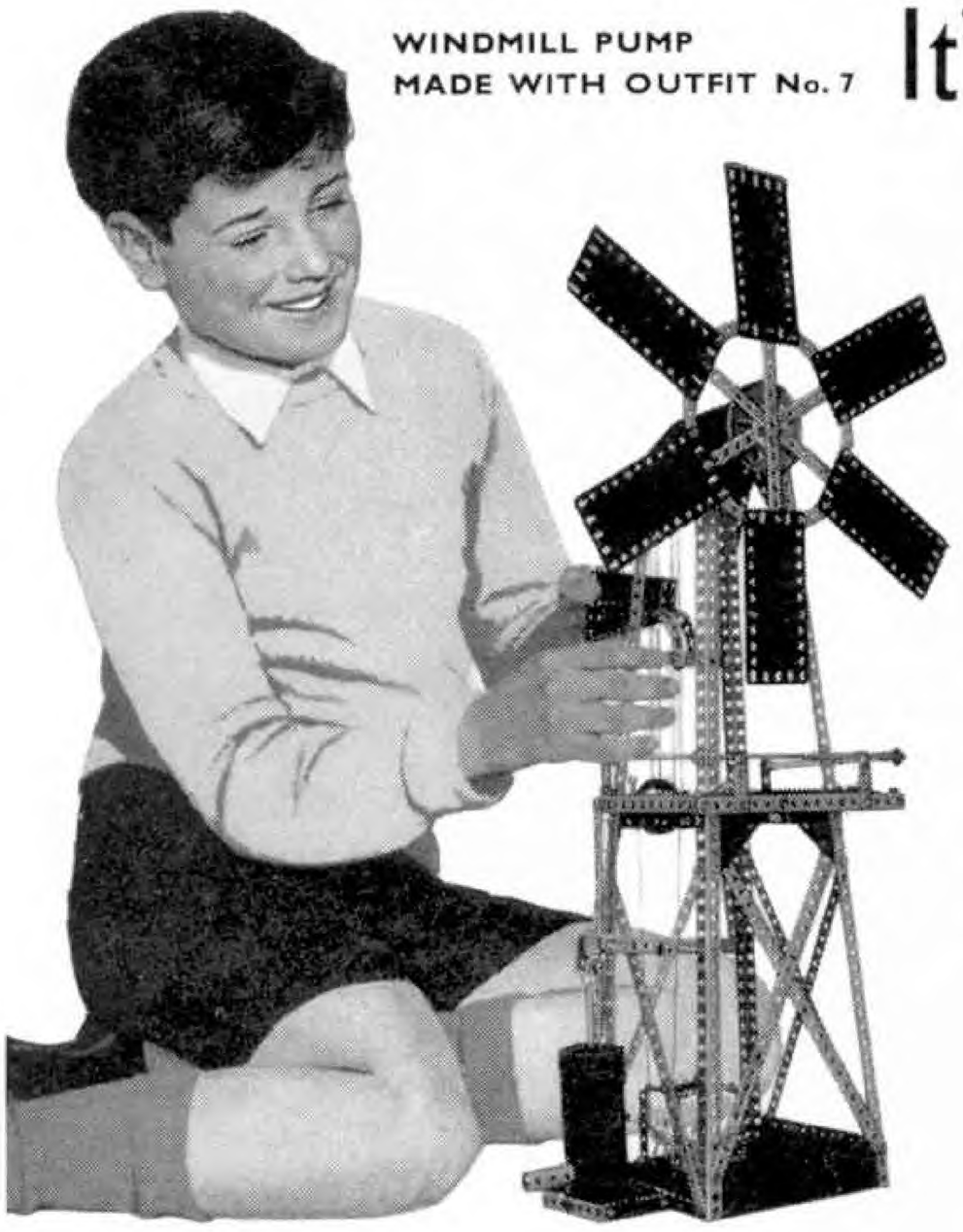




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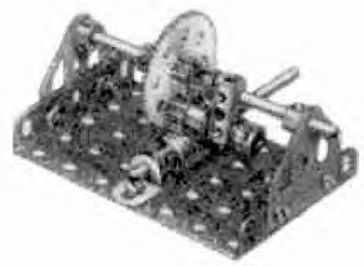
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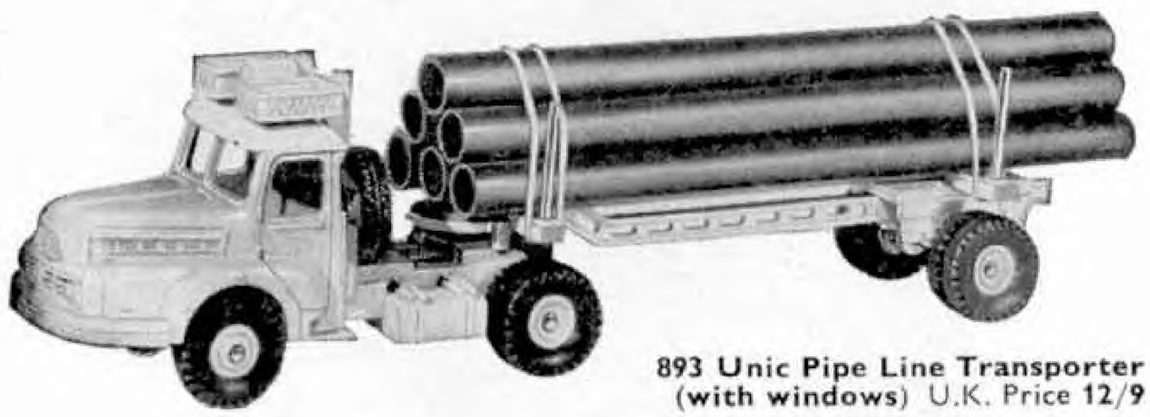
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846



847



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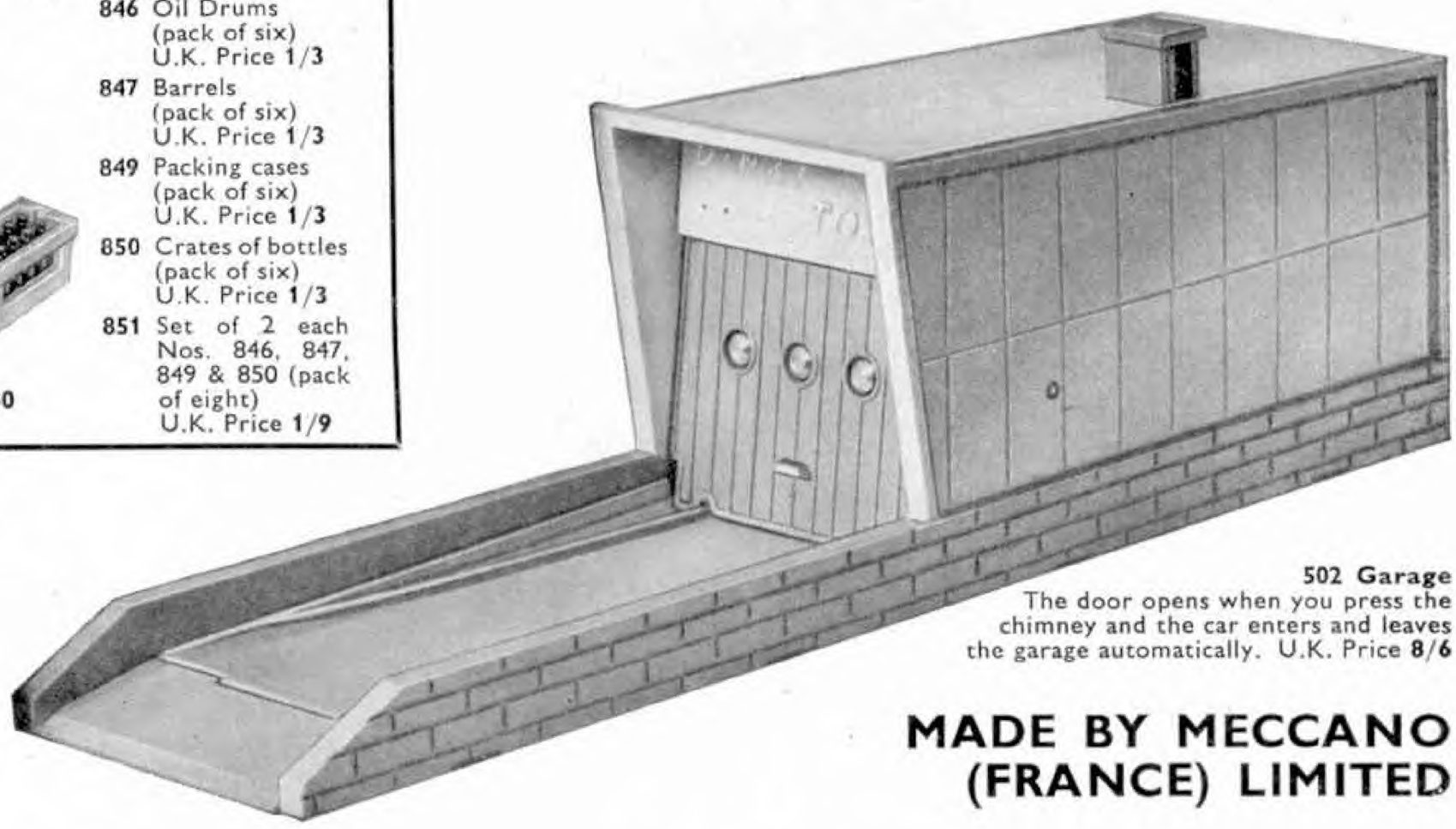
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PICTURE BLUR

Blurred snaps never make a good album. They are caused by excessive movement of the subject or the camera. Here are a few simple rules on how to avoid picture blur.

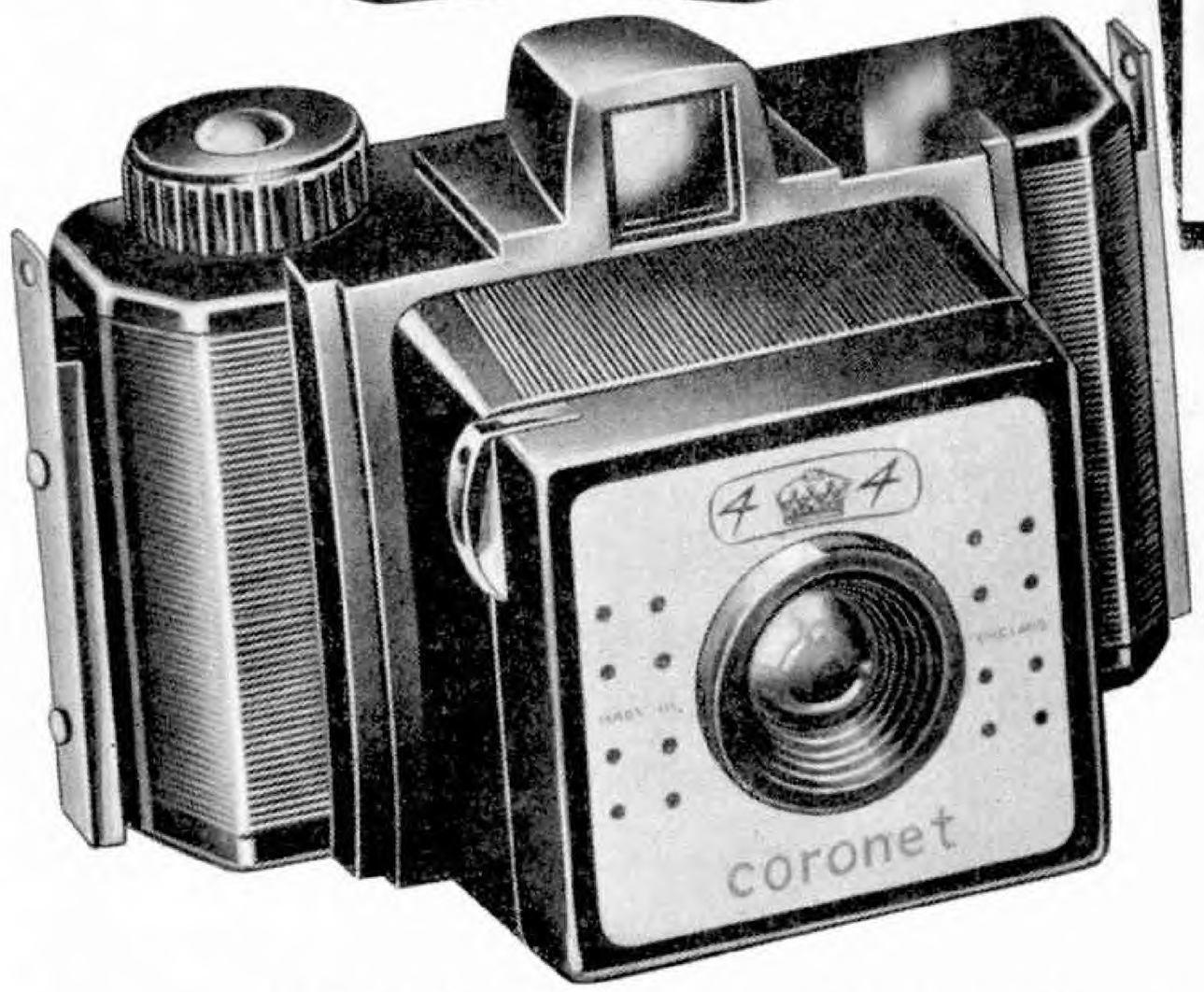
Unless you have a portrait attachment on your camera stand well back, about 10' from your subject and hold your camera steady. You can always have a particular part of a picture enlarged.



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MECCANO MAGAZINE

Volume XLVI **No. 6** **June 1961**

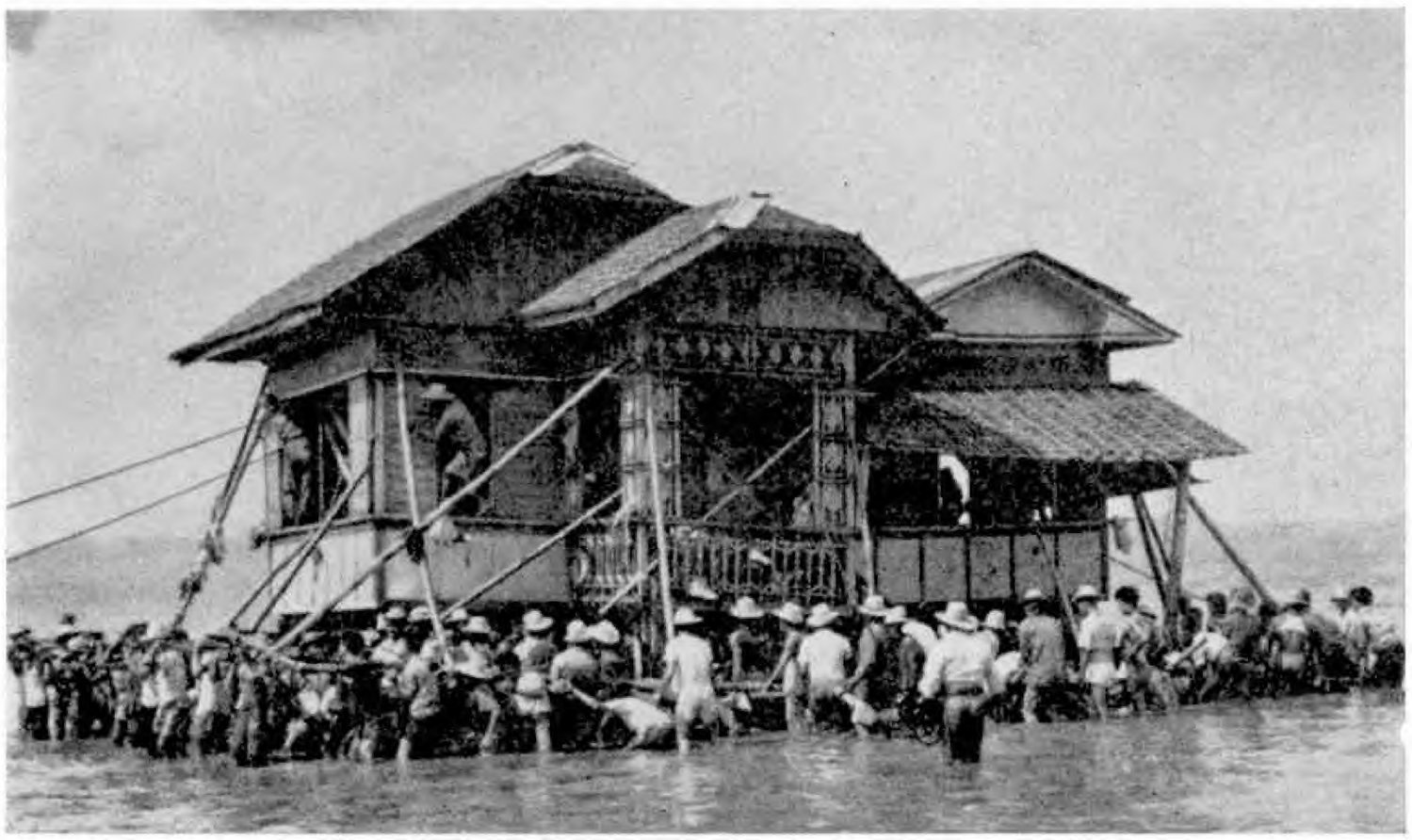
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ERNEST MILLER

There's Nothing Like Team Work



SUMMER is with us once again, and on cricket grounds all over Britain the sound of bat meeting ball is heard. We welcome the Australians to this country once again and hope that we shall have some keen and exciting play in the Test series. In the pages of the *Meccano Magazine* this month Arthur Turner, who has been writing for the *M.M.* for a number of years, describes the skill required in the making of cricket bats, and I am sure you will find the article full of interest, particularly if you have a leaning towards sport—and most boys have.

We in this country have a saying, when we feel that something is not as fair or level as it should be, that "It isn't cricket!"—a comment which is at one and the same time an acknowledgment of our love of the game and a tribute to our belief in fair play.

All types of games teach the team spirit—"Pulling together", for instance, is not just a maxim for oarsmen but applies to combined endeavour in other aspects of life. Yet it always seems to me, as one who has taken an interest in all kinds of games, that cricket is pre-eminently the one which teaches the value of the team spirit. There are times when the lone wolf must play his part in life; when the solo performer must shine; when a do-or-die effort can depend only on one man. But these occasions are infrequent against the times when an all-round combined effort is required to achieve an important object both on the field and off it.

I have chosen our photograph this month because it illustrates, in a rather unusual way, the sort of thing I have in mind when I write about the team spirit. "Bayanihan", which means team work in their language, is a common practice among the people of the Philippines. And a group of Filipinos are giving a practical demonstration of this spirit as they move a house by lifting it bodily on a specially constructed bamboo framework. The house, which is a typical example of the buildings-on-stilts which stand along the seashore in that far-off part of the world, was the last one to be moved from the site of a new refinery which was being built on the coast at Tabangao, Batangas, south of Manila. The picture is by the Shell Photographic Unit. **THE EDITOR**

Next Month: A STRATFORD ENGINE PRESERVED

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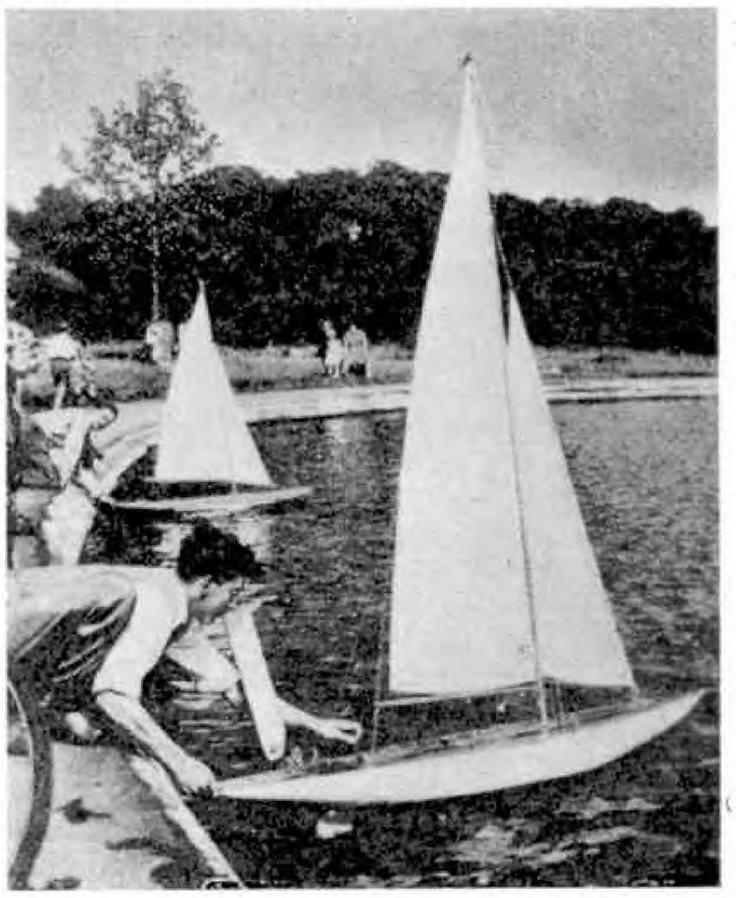
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By John Westbury

OUR FRONT COVER

The fascination of sailing is by no means confined to the yachtsmen of Cowes and other famous sailing centres. This month's cover picture, by Edward Cowin, shows a typical scene at one of the model yacht racing events held at the boating pool on Southampton Common.

The two competitors shown are in position with their craft and are ready for the starter's signal. Once this is given the performance of each yacht will rely upon the setting of the sails and other adjustments which have been carried out beforehand.



BRITAIN'S FIRST COMMANDO CARRIER



"Bulwark" Has A Variety Of Roles

HER Majesty's ship *Bulwark*, 22,000 ton new-look aircraft carrier, is now in operational service in the Far East. With her arrival in Singapore, a new and intriguing chapter in Britain's naval history begins. For she is no ordinary warship. We have here, for the first time, a British man-of-war whose permanent main armament consists not of guns or strike aircraft, or even guided missiles, but of 600 helicopter-borne Royal Marine Commandos. This presents the old techniques of amphibious assault in an entirely new and up to date guise. It is an imaginative and exciting concept.

More critical tasks

The ship has a variety of roles. First of all, she is admirably suited to carrying out the two traditional peacetime tasks of the Royal Navy, namely policework in distant waters, and provision of assistance at the scene of civil disasters. By her mere presence in turbulent areas she will reduce tension and deter troublemakers. In this she will resemble the policeman on his beat.

If, despite her efforts, the situation deteriorates and the sparks begin to fly, she can turn fireman, too. In that role she will aim to reach the scene of the outbreak with her helicommandos as quickly as possible, and scotch the trouble before it grows too much for her to handle alone. In the more critical tasks of the Cold War and Limited War, it is very probable that she will form part of larger forces, and will be employed in a spearhead role.

By
MAJOR B. I. S. GOURLAY
O.B.E., M.C., R.M.

The advent of the Commando Carrier has been hailed with enthusiasm in many quarters. Have you wondered what it is that makes this ship such an attractive newcomer; why it is that, hard on her commissioning, another carrier, the *Albion*, has already been earmarked for conversion to a similar role?

To both these questions, the answer is that such ships meet an urgent present-day need. The times are gone when Britain was able to position strong forces at a large number of points around the world. Today, if trouble breaks out far from home, it is usual to fly out ground troops from the United Kingdom. This takes time. Moreover, it is often more easily said than done. The aircraft require over-flying rights for all countries en route, good airfields and fuelling facilities at the end of their journey. When they have landed, the embarked troops must find their way by other transport to the battle zone. It can all too easily happen that not one of these facilities is available.

On the other hand, with the strategically-placed Commando Carrier troops can be quickly and freely moved along international sea routes without reference to any nation, friendly or hostile. They can take with them all their essential equipment and stores, and even some vehicles. When they reach the scene of the trouble they can be put ashore at once, if necessary straight into action. Difficult beaches, high cliffs and other obstacles to normal movement present no problems. Flying at 80 knots, they will not only move over or round these obstacles, but will land where they are least expected. If it should happen that they touch down in a bad position, they can be picked up again and landed somewhere else in quick time.

H.M.S. Bulwark and Whirlwind Helicopters of 848 Squadron R.N. in the English Channel. Vehicles of 42 Commando R.M. are on flight deck. Photograph: Charles E. Brown, Worcester Park, Surrey.



Pictured above on the flight deck of H.M.S. Bulwark are helicopter-portable Citroen 2 CV vehicles of 42 Commando R.M. and Whirlwind Helicopters of 848 Squadron R.N.



Royal Marine Commandos being lowered in landing craft manned by Royal Marines.

Once ashore, the Commandos, supported from the ship with all their requirements, will continue to have the use of the helicopters for tactical tasks of all sorts.

The ship itself, from outboard, looks much like any conventional carrier. The main difference is that there are carried, at fixed gantries, four assault landing craft of the latest type. These craft can take 30 men, or a quarter-ton Land Rover, and are specially designed to run in on beaches to unload passengers and stores. Before they touch down, they drop astern a kedge anchor. Should they have trouble in getting off the beach, they retract by winching in on the anchor. These landing craft, which make about nine knots, are ideal for landing stores to support Commandos ashore. The more stores they can take, the greater the number of helicopters they release for tactical tasks in direct support of the operations inland.

Once the Commandos have landed they will require their vehicles on most occasions. Of these they have 80. A sizeable number can be stowed on the flight deck without unduly interfering with flying. Included among them are 25 light Citroen runabouts which the helicopters can carry. These contrast with the Land Rovers which are too weighty to be lifted by the ship's current helicopters. The heavier vehicles, the one-ton and three-ton trucks, are disembarked on to jetties or lighters, where found. If these are not available, they will in future have recourse to large inflatable rafts to be carried on board. Smaller man-carrying inflatables are already held in the ship, ready for raiding. Men will be able to land in them from the ship direct, or from the assault landing craft. History has repeatedly shown that small, well-trained raiding parties can, by stealth, achieve results out of all proportion to their strength. The Commandos are specifically trained and equipped to take advantage of this fact.

For knock-out punch

But it is to the helicopter that the Commandos really look to provide them with surprise for landing their knock-out punch. The aircraft in use at present is the Whirlwind Mark VII. This is a copy of the American S55 but has an English engine, the Alvis Leonides. Under average temperate conditions it carries five men at about 80 knots for about 100 miles. It will be superseded by the much more powerful gas-turbined Wessex, now in production, which will carry at least twice the number of men at well over 100 knots over the same distance.

Helicopters have impressive capabilities. Their power of vertical take-off and descent, their speed as compared with motor transport, their ability to fly into and out of confined spaces and to operate in weather which would prohibit the use of landing craft or parachutists, are all solid advantages. But we must not be blind to their limitations. They are expensive and use a lot of high-grade fuel; their lifting capability is subject to changes in atmospheric conditions; they are noisy. They are, too, somewhat vulnerable, although just how much is a matter of debate.

Difficult targets

In battle they fly low to the ground and present difficult targets to fast-moving modern jets. Even when found, they are hard to dispose of because of their comparatively slow speed. From the ground, too, they are not all that easy to shoot down.

At Port Said, in November 1956, a helicopter carrying Royal Marine Commandos received 20 bullet holes of which six were in the main rotor blades—and it still flew. In Algeria, in September 1959, over a flying period in which 200,000 troops were lifted, 65 helicopters were hit, of which only two were brought down.

Finally, we turn to the Commandos themselves. These men, all Royal Marines, the Navy's own soldiers, undergo as tough a training as any of Her Majesty's Forces. In essence, they are (*Cont. on page 227*)

Making Cricket Bats Is A Craft

IN these days when so many products are machine-made, it is interesting to come across a few still produced mainly by hand, and cricket bats are in this category. During the next few months thousands of cricketers in Britain will be playing their favourite game with bats made by craftsmen in the heart of the Sussex countryside. Cricket bats from the same source are also sent to distant parts of the world.

Sussex-made bats have, in fact, been wielded by many famous cricketers since the making of such things was begun there more than eighty years ago. The great Dr. W. G. Grace scored his 100th century with such a bat in May 1895, and since then celebrated players all over the globe have testified to the excellence of bats from that part of Southern England.

BY ARTHUR TURNER

While it is true that machinery is used at one or two stages in the production line, even at these points the skill of the operator counts for a great deal, and no machine has yet been invented which will automatically turn out this class of bat. The chief materials used are willow and cane—willow for the blade, because it is resilient, tough, and light, and cane for the handles because it is strong, yet light. Other materials include rubber, cork, string, tape, and glue.

Of the many varieties of willow tree only a few are suitable for bat making. Best of all for this purpose is the one known as the *Salix Caerulea*, a shapely tree which occasionally attains a height of 100 feet and a girth of sixteen–eighteen feet. It is entirely an English tree. In fact, it was originally peculiar to East Anglia, and although it is now grown in other regions, too, all willow trees of this type came, in the first instance, from East Anglian stock.

A hallmark

The variety is distinguished by a bright yellow "butterfly" stain often to be seen on the blade of a cricket bat, and although some players unwittingly believe the stain to be a fault, or knots, it is really a hallmark of the finest quality willow.



After being sawn into 28-inch lengths, the timber for cricket bats is split into "clefts", each piece providing material for one bat blade. Splitting is done with an axe and calls for great skill.

For cricket bat making the willow trees are grown from cuttings known as "sets", and they have to be perfectly straight and free from knots and other blemishes. Sets are ready to be transferred to the plantation when they are about fourteen feet high, this allowing them to be planted 2 ft. 6 in. deep. They are planted in rows at least 30 feet apart and in the first year or two the ten-foot length of trunk needed for bat making has to be kept clean from shoots and buds.

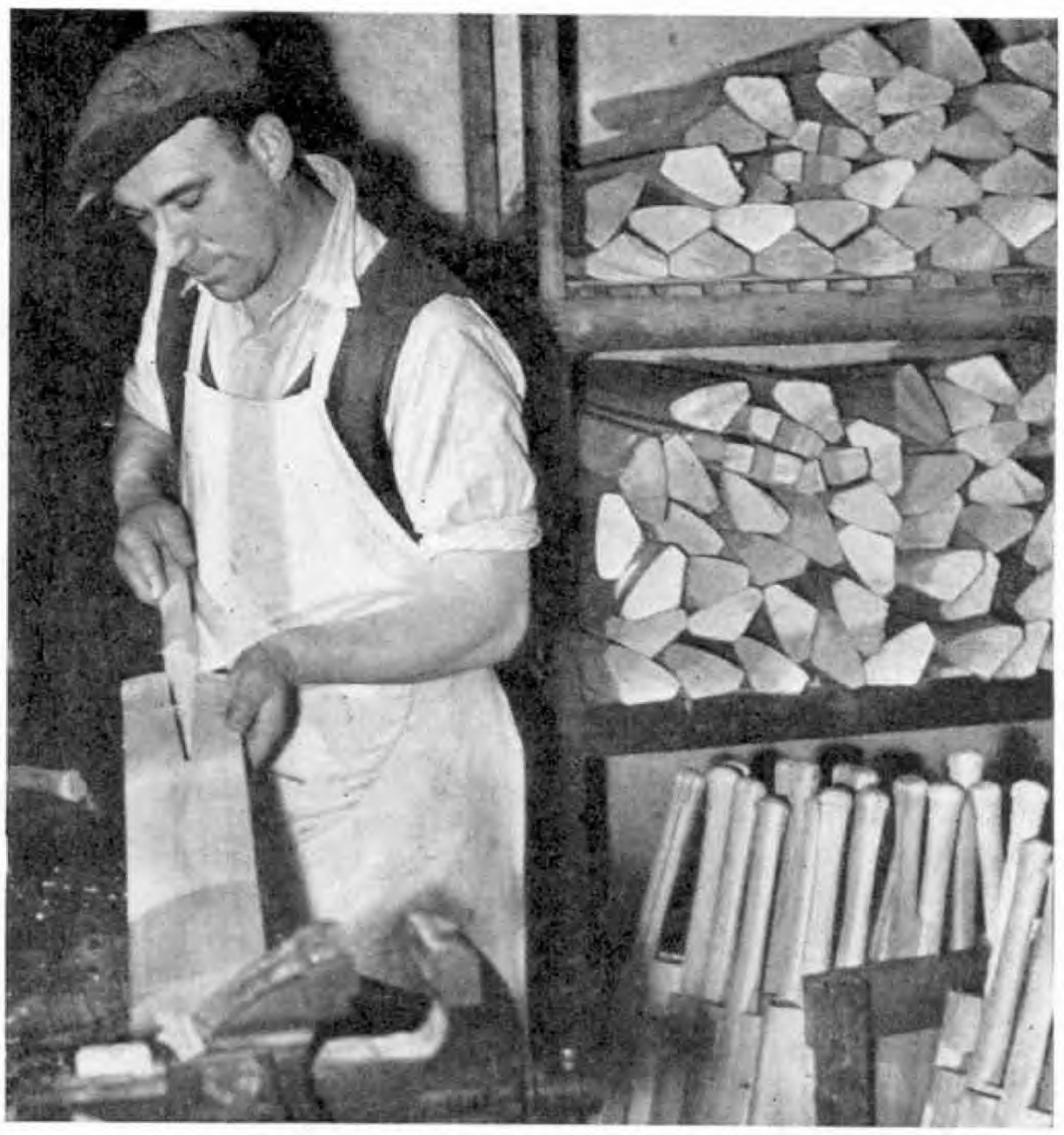
The trees are usually felled when they are between twelve and fourteen years old, by which time they have a girth of 50 inches or so when measured at a height of five feet from the ground, and felling is mostly done in winter, when the sap is down. The trunk is then cut into 28-inch lengths and these are split into clefts, each cleft, or wedge-shaped piece, being the material for one cricket bat blade.

The bark is removed before the clefts are taken to the stackyard, where they are left for seasoning, a process which takes from nine to twelve months. They can



A double row of young willows grown for bat-making. In the early stages, that part of the trunk needed by the bat-maker is kept free from buds and shoots.





Shaping the bat blade (left) is a job for a skilled craftsman, and the balance of the bat depends on his judgment. (Right) Fitting the handle to the blade also requires great precision.

now be conveyed to the factory for attention by craftsmen.

Each blade has to be cut into the rough shape of a bat, and the operation is performed with 5 lb. axes and draw-knives. It entails a great deal more than just "chopping wood", and it has to be done by hand because special attention must be paid to the characteristics of each piece of wood.

A continuation of the seasoning is necessary before the blades are shaped, and they go into the drying sheds, in pairs, for another year. The felling of the trees, the sawing into lengths, the splitting into clefts, and the seasoning—all these jobs have to be carried out to a carefully arranged programme, so that there is a steady flow of work in the factory.

A matter of experience

The draw-knife, a two-handled tool, is used again for shaping the blades after the craftsman has closely examined each piece of wood with which he is to deal. Long experience tells him which end he must use as the shoulders of the bat. Practice also enables him to pare and cut the wood according to the characteristics of each particular blade. On his skill and judgment will depend, to a large extent, the perfection of the bat.

Each blade must be pressed three times during manufacture, and the edges are also hammered and pressed. If this were not done, the bat would not withstand the blows from cricket balls.

Pressing is one of the few processes in bat making which is performed by machinery. It is carried out with an automatic power press, but it does call for considerable skill, the operator having to judge just how much pressure each blade needs. After it has been pressed the blade must feel hard and firm, but if the job is overdone the blade will lose its resilience and the bat will be inferior.

Cutting out the splice

The blade is now ready to have a splice cut out, by a special machine, before it receives the handle. The handles are cut wedge-shaped to fit the splice, and the process requires great precision, for there is nothing to hold the handle in place except a tight fit, and glue.

The best cane for cricket bat handles comes from Indonesia and Malaya and is known as "Sarawak" cane. Each handle consists of a cluster of a dozen or more pieces glued together, with rubber or cork insertions to absorb the jarring.

First, the canes are sorted to ensure that only the very best are used, and those selected are cut into suitable lengths. After being built up and glued the assembly is planed and is then turned, on the lathe, to its final shape.

Ensuring perfect balance

The craftsman's next job is to cut the wedge which will enable the handle to be fitted securely into the V-shaped part of the blade. Even at this stage, in spite of the care and skill expended on it, the bat may need further expert attention to give it perfect balance and a good feel. And so it is handed to a shaper, who pares and shapes it until he is satisfied that it cannot be improved. He tests it for balance and examines it minutely for any manufacturing flaws before passing it to the polisher.

Polishing is done with different grades of glass-paper, but the utmost caution has to be exercised to avoid altering the shape and balance. All good bats are also honed with the bone of a deer.

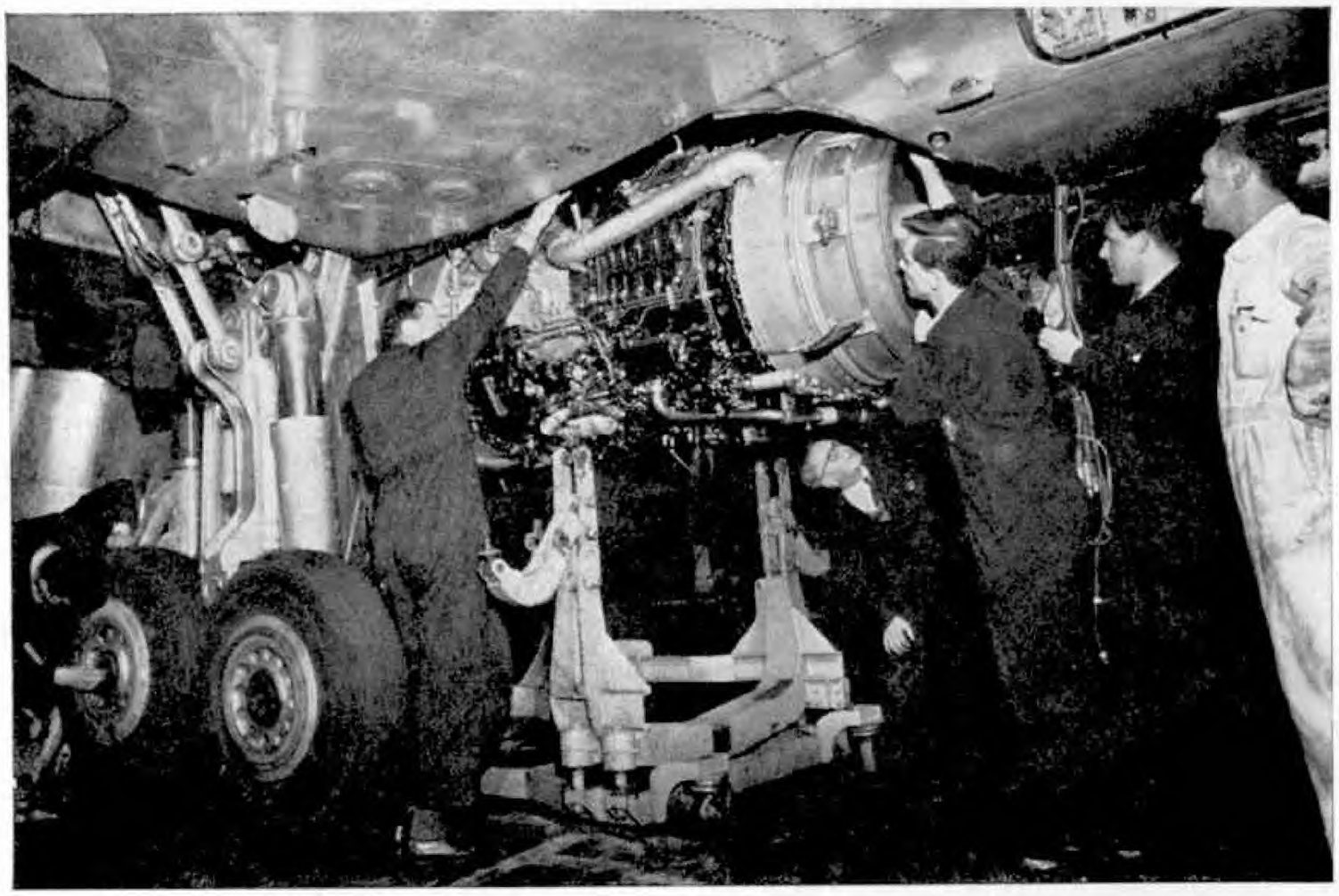
If you examine the base of a cricket bat you will see a small hole there, and this arises from the next process—the job of winding twine round the handle. The operation is carried out by fixing the bat in a machine similar to a lathe, which spins it rapidly as the twine is run on to the handle from a spool. The tiny hole is, in fact, caused by a spike which presses against the base of the blade to hold it firmly as it spins round.

Don't blame the bat

Two other operations remain to be performed; the rubber sheath has to be rolled on to the handle and the name of the bat has to be stamped on it.

When you are clean-bowled for a "duck" in a match where you hoped to shine, it is hardly fair to blame your discomfiture on your bat! The craftsmen who produced it have put all their skill into making it as perfect as possible. Nobody will be more pleased than they if you knock up a century.

A Million Miles Between Overhauls



This is the Rolls-Royce Avon engine which performed so well in a Comet that, after running over 2,600 hours and being inspected. it was re-installed for a trial extension of a further 300 hours. The photograph was taken at B.O.A.C.'s engineering base at London Airport.

AIR Registration Board approval to run the Rolls-Royce Avon engines of their Comet jet-liners for 2,600 hours between major overhauls has been received by B.O.A.C. This means that by the time the engines have to be taken out of the aircraft for overhaul, each will have flown more than 1,000,000 miles in service—a distance equivalent to two return journeys to the Moon.

A long overhaul life is, of course, the best possible proof of the efficiency and reliability of an engine. No other turbojet in the world can match the Avon in this respect; yet the engine shown in the illustration above was still performing so well after 2,600 hours that it has been re-installed for a trial extension to 2,900 hours.

So many Avon engines are in service with air forces and airlines all over the world that the total running time accumulated by all the civil and military versions is now well over 3,500,000 hours.

AIR NEWS

By

John W. R. Taylor

HIGH HAULAGE

Helicop-Air, of Paris, have been using their Alouette II helicopters to help in the construction of mountain refuges for mountaineers high in the French Alps. The job involved lifting 80–100 tons of materials for each hut up to tiny landing platforms which had been specially built near the sites for the refuges, often at heights above 10,000 feet.

The Alouettes are also assisting in the upkeep of existing buildings in the Alps. For example, they hauled about fifteen tons of materials needed for repairing the Valot Observatory.

HONEYCOMB LIGHTPLANE

The new MFI–10 Vipan (Peewit) four-seat monoplane, built by A.B. Malmo Flygindustri of Sweden, and illustrated on this page, is much more interesting than it looks at first glance. To start with, it is the first aircraft ever built entirely of metal honeycomb sandwich, consisting of two light alloy sheets separated by a thin-foil honeycomb core. This form of structure combines great strength with light weight, but has been made practicable only by recent developments in metal-to-metal bonding.

Another unusual feature is that the three tail surfaces are one-piece "all-moving" components, without the usual fixed fin and tailplane, and are all interchangeable. The curved main undercarriage legs are made in one piece, passing through the fuselage, and are of glass-fibre.

The prototype Vipan is powered by a 160 h.p. Lycoming 0–320 engine, which gives a range of 620 miles at 124 m.p.h., and will be followed by two more prototypes with 180 h.p. Lycoming engines. It is hoped that the type will be adopted by the Swedish Army for liaison duties. It is also suitable for use by flying clubs and by private owners, and as a glider-tug.



There are several unusual features about this lightplane the new MFI-10 Vipan (Peewit) monoplane built by a Swedish firm.

BLACK ARROWS' SUCCESSORS

It was no easy task for any R.A.F. unit to take over from the famous "Black Arrows" of No. 111 Squadron, who were Fighter Command's top aerobatic team for four years until they began to exchange their Hunter aircraft for Lightnings. However, it looks as if No. 92 Squadron will be well able to carry on the good work this year. Journalists who watched them rehearsing their display over Cyprus, where they were sent for routine air-firing practice earlier this year, were very impressed by both the superb formation-keeping and the newly-devised manoeuvres.

The Hunters of No. 92 are coloured royal blue, with a white flash line, and bear red-and-yellow chequerboard markings and the squadron badge on the nose. The badge shows a striking cobra, in recognition of the fact that No. 92 was one of the "East India" squadrons of World War II, and carries the motto "Fight to the Death".

No. 92 has certainly earned that motto. It was formed in September 1917, with

A FISHY STORY

While flying over the Thames Estuary, the crew of an R.A.F. air-sea rescue helicopter from No. 22 Squadron, Felixstowe, saw an enormous conger eel floating on the surface of the water. They decided to catch it with their rescue-net and, after hoisting it into the aircraft's cabin, discovered that it was injured.

In the hope of reviving it, they flew it back to their base, but it died shortly afterwards and their only consolation was that they had visible proof of having caught an 86 lb. fish from the air, which must be unique among angler's stories!

S.E.5A fighters, and accounted for 37 enemy aircraft during its five months of operation over the Western Front. It was disbanded from 1919 to 1939, but soon got back into its stride, shooting down 23 enemy aircraft in its first day's operations in Spitfires over the French coast on May 23, 1940. By the end of the war, it had been credited with 317½ enemy aircraft destroyed, 107 probably destroyed and 184 damaged, and had also dropped 546 tons of bombs from its Spitfires in support of the advancing Allied armies in North Africa, Sicily, Italy and Southern France.

YUGOSLAV RECORD-BREAKER

Yugoslavia is a country that seldom makes aviation news, except with its sailplanes; so it was interesting to learn from the latest list of officially-recognised records that two of its baby jet-planes set up speed records over a 9–15 mile straight course on May 19, 1960.

The faster record, at 466.24 m.p.h., was set up in Class C–1–d (aircraft weighing between 3,858 and 6,614 lb.) by the S–451MM Matica (Queen Bee) two-seat trainer. Powered by two 880 lb. thrust Turbomeca Marboré turbojets, this little aircraft has an all-metal airframe, with wings which fold upward outboard of the engines for transport and stowage. It spans only 26 feet and has a normal take-off weight of 5,172 lb.

The Matica is, in fact, one of a family of three aircraft which are almost identical except for their forward fuselage and cockpits. The two others are the T–451MM Strsljen II (Hornet II), a single-seat trainer, and the J–451MM Strsljen, a single-seat fighter-bomber, which has two 20 mm. guns in fairings under its nose and attachments for up to four rockets under its wings.

FOR ARMY RECCE

Britain has bought 32 Radioplane SD–1 surveillance drones for service with Army units in Germany. Developed from the little radio-controlled target aircraft which have been used for anti-aircraft practice for many years, the SD–1 carries a still camera, or cine-camera, to photograph enemy troops and positions in front-line areas over which it might be dangerous, or impossible, for piloted reconnaissance aircraft to fly. It is powered by a 72 h.p. McCulloch four-cylinder two-stroke engine, which gives it a top speed of 184 m.p.h. Wing span is 11 ft. 6 in.

Although the SD–1 does not look much more complicated than some radio-controlled models, and is "flown" in the same way from a control box on the ground, it requires a great deal of expensive equipment to do its job efficiently. A lorry and trailer are normally used to carry the radio and radar control, tracking and plotting systems, and a mobile dark-room is needed in which to process the films exposed by the drone. The SD–1 itself has to carry radio-control equipment, flares for night photography, transmitters and lights for tracking, and a parachute for recovery at the end of its mission.

HOW MANY JET-LINERS?

How many jet airliners would you think are now in service throughout the world? Figures issued recently by the International Air Transport Association show that their 90 member airlines had only fourteen jets at the end of 1958, but that the number had risen to more than 300 by the beginning of 1961. This shows how rapid has been the increase in jet air travel, and it is only a start, because at least 600 jet-liners will be in service by 1963.

To this total of aircraft flown by I.A.T.A. members must be added the huge jet fleet operated by Aeroflot of Russia. No precise figures are issued, but it is believed to include at least 150 Tu–104s.

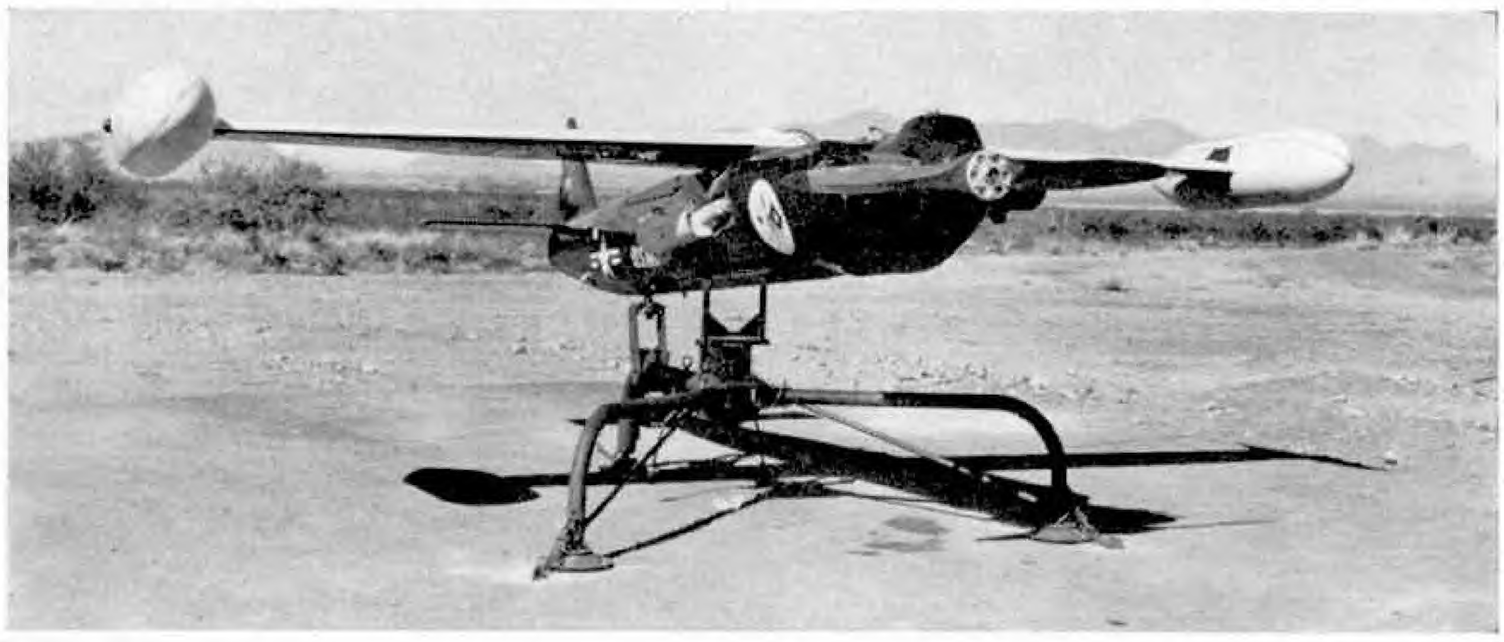
DOUBLE TIME HEARTBEATS

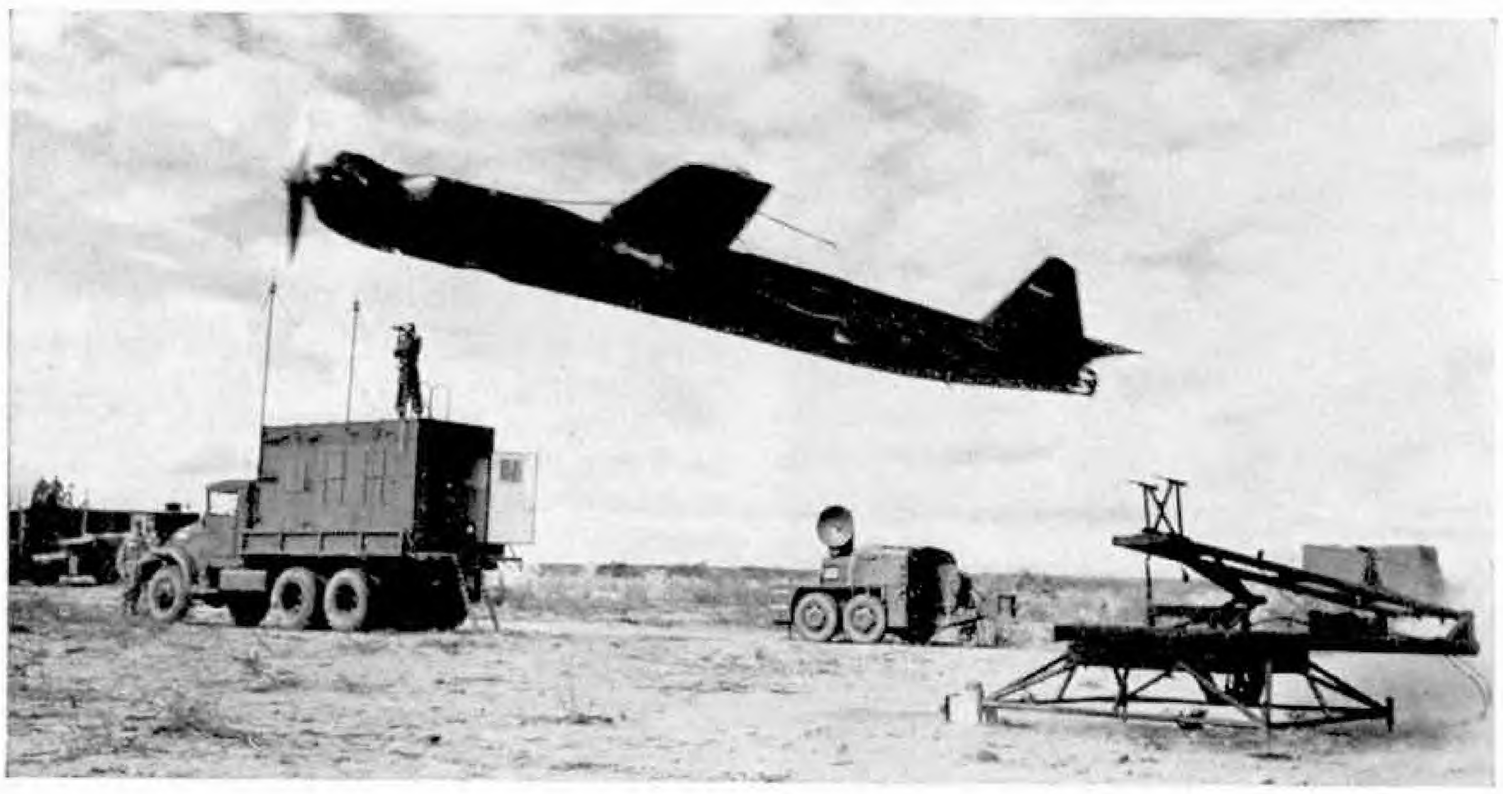
Major Bob White of the U.S.A.F., who has piloted the North American X–15 research aircraft at 3,074 m.p.h., revealed recently that the pilot's heartbeat and breathing rates double during the mid-air launching of the aircraft, during burn-out, when the engine thrust is suddenly terminated, and during landing.

Biomedical monitoring of the X–15 pilots has shown that their pulse rate increases from a normal average of 72 to between 140 and 160 during these critical stages of each flight. This indicates only the physical and mental effort involved in flying the aircraft, according to Major White, and does not in any way impair the pilot's ability.

* * * *

A Tu–114 turboprop airliner, carrying 170 passengers, has flown non-stop from Moscow to Khabarovsk, a distance of 4,350 miles, in only 8 hr. 20 min.



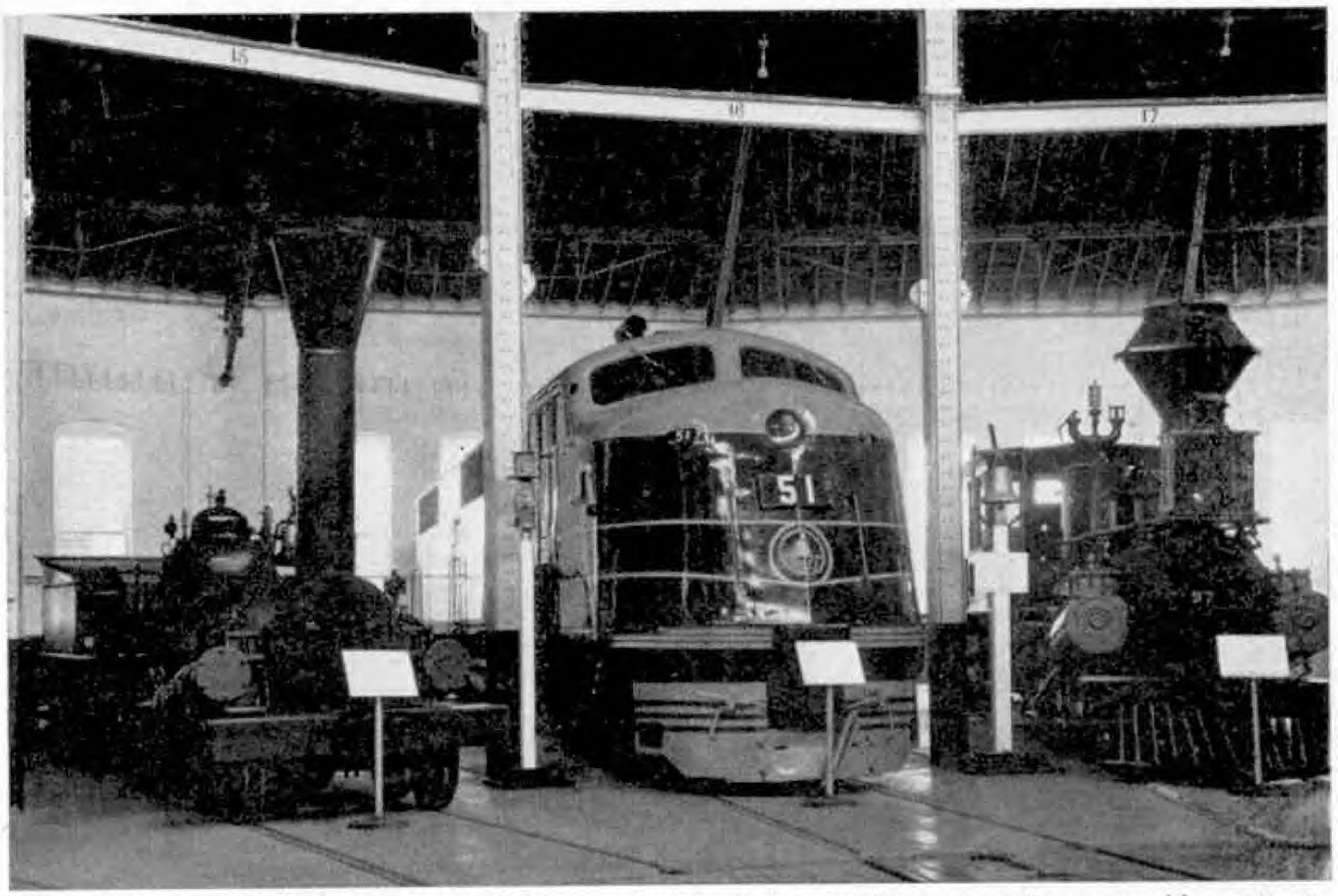


These two pictures show different versions of the SD-1 radio-controlled aeroplane. The picture below, which is a United States Army official photograph, shows the machine just after launching. The illustration on the right shows the SD-1 with wing-tip tanks.

AN EXCITING GLIMPSE OF PIONEERING DAYS

Baltimore's Railroad Museum

By Sidney Allinson



These three engines on display in the Baltimore & Ohio Railroad Museum roundhouse provide contrasts. Left to right they are: An exact replica of the "Lafayette", built in 1837; Diesel Electric No. 51, the first streamlined diesel locomotive unit ever built (1937), and the "Memnon", built in 1848 and nicknamed Old War Horse for its service in the American Civil War.

IN the building up of the United States of America, the railway —more than any other single factor —was responsible for rapid growth and settlement of the entire nation. Before the advent of steam, transport in the United States was dependent on slow river traffic or the even slower, and more dangerous, overland treks by wagon trains.

When the first primitive locomotives were invented in England early in the nineteenth century, people in America quickly saw the great potential of such revolutionary machines. Freight and supplies to feed emigrants, and the soldiers to protect them, were moved into the vast new lands being opened out West beyond the Missouri River. Within a lifetime, the "Iron Horse" had pushed the expansion of America to the Pacific shores of then—Spanish California.

Thus, the history of railways in America is of more than mechanical interest. It is a vital part of national destiny—the very core on which a whole continent was given new life, cities and industries.

Much of this fascinating romance can be relived today by visitors to the Transportation Museum in Baltimore, Maryland. Here, in a cluster of smoke-blackened buildings that formed part of America's first railway station, the Baltimore and Ohio Railroad has gathered a unique collection which delights the eye of every train enthusiast.

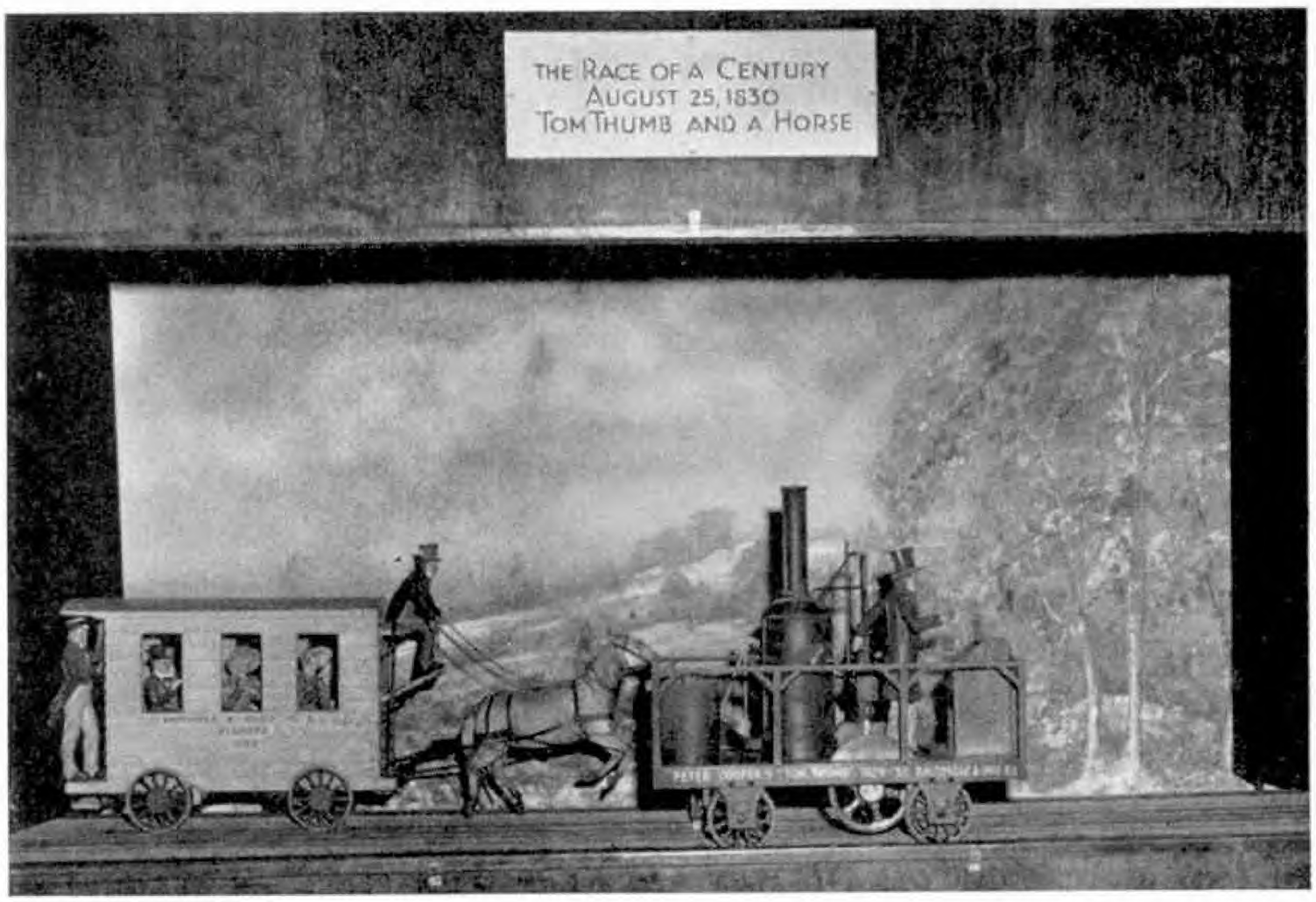
Scale models, replicas, rare old photographs, early handling equipment and actual rolling stock all combine to form an exciting glimpse back over more than a century of railroading.

The exhibition hall itself forms a fitting setting for this colourful display, for the building was originally the Mount Clare Railway Station, completed in 1832. Strangely enough, one of the first passenger coaches to run over tracks from this point was propelled by sail-power! However, this weird experiment was soon abandoned in favour of steam engines.

One of the first exhibits seen by the visitor is a collection of model bridges, said to be the most extensive of its kind in the world. Early covered bridges contrast with huge cantilevers and intricate suspension bridges. Visitors jostle eagerly to operate several working models in large glass cases. Push-buttons, in tempting array, set in motion swing bridges and rolling lift spans, while ships pass below or trains travel over them.

Miniature railway

But the exhibit which probably draws more attention than any other here is the miniature railway laid out on a raised platform 60 feet long. The detailed three-track system is fully automatic and the trains are always in motion. All rolling stock is to one-fortieth scale and runs through a proportioned landscape of mountains, prairie, desert and cities. This



This model diorama depicts the now famous race between "Tom Thumb" and a horse-drawn train.





Locomotive No. 217 (top) is typical of the "camel-back" type of locomotives—so called because the driving cab was placed high on top of the long boiler. Below: This J. C. Davis No. 600 was among the original "Mogul" types.

elaborate model railway is valued at 50,000 dollars.

Tiny light-signals flicker, stations broadcast recorded announcements and busy diesel-shunters move cars in freight yards. Dozens of various types of locomotives go about their business, giving a panoramic view of nation-wide railroad activities. A streamlined, yellow California Zephyr streaks down the straightway, while tiny wagons are hauled up to a mountainside iron mine and tractors are loaded aboard Pennsylvania flat-cars.

Step through a nearby archway and you find yourself standing in a cavernous roundhouse with its roof 100 feet above you. Its huge cupola is braced, on pillars, by radial metal struts collared to a central iron ring. Even the magnificent roundhouse cannot dwarf the massive gleaming circle of historic locomotives assembled there. Beautifully preserved, these powerful giants of the past seem to be merely resting from their historic journeys.

Closer inspection reveals that, in addition to actual locomotives, there are several clever reconstructions in the display. Called "Pangborns", after their builder, they are full-scale wooden models originally made for the Columbian Exhibition of 1893.

Particularly interesting is the accurate model of the "Stourbridge Lion". This engine was built in England, in 1828, for the Delaware and Hudson Canal Company and made the first run of a steam locomotive in America.

Nearby is a model of the first locomotive actually to be built in the United States. Peter Cooper's "Tom Thumb" looks weird indeed to the railroad enthusiast of today. Its name gives a clue to the smallness of the engine—its boiler tubes were made of musket barrels! A celebrated event in which "Tom Thumb" took part was its race with a horse-drawn train which ended in defeat for the tiny engine when its drive-belt failed.

Among the brightly-polished, original engines on view is the "J. C. Davis" which was built in 1864 and was one of the forerunners of the Mogul type. These locomotives were named Mogul because of their size, which, at time of building, seemed gigantic. Many big engines are known by this name even to the present day. Early Moguls increased freight-pulling power by providing a two-wheel leading-axle, and six driving wheels.

Developed just before this type were the "Americans", which were squat little "balloon stack" engines, with enormous cow-catcher grilles hanging in front. The wide-mouthed smoke-funnels were made in this way to catch flying sparks and burning embers.

A matter of contrast

A fine example of early engineering is seen in the Mallet-type, steam locomotives with articulated engine units which were first developed by the famous French designer Anatole Mallet. Mallet locomotives are really two separate sets of engines operating under one long boiler which supplies steam for both. The rear engine is fixed rigidly below the boiler, while the front engine is fastened only by a centre pin. This enables Mallet-type locomotives to move more quickly around curves. Such jointed, flexible construction gives them the description "articulated".

In striking contrast is the first diesel-powered U.S. train ever to be put into passenger service. This gleaming aluminium "Zephyr", built in 1935, initiated the exciting, streamliner, trans-continental service which linked Chicago with San Francisco in less than 40 hours. By the mid-1930's diesel streamliners were flashing the 960 miles from New York City to Chicago in as many minutes. Yet, this sophisticated train, which was hauled by powerful diesel-electric units, was rivalled a century ago. In 1848, a Boston locomotive, appropriately named "Antelope", travelled a breathtaking 25 miles in 25 minutes.

In addition to the superb exhibition of antique locomotives, there are displays of various early freight and passenger cars. Here are gathered several of the most notable advances in American rolling stock design, including the first iron box and hopper cars from which today's aluminium grain cars and petroleum tankers are descended. The iron boxcars shown were used to haul ammunition in the American Civil War and were, in those days, considered bullet-proof.

Railway hobbyists find themselves equally interested in the extensive historic collection of railroad lamps, early signal equipment and timepieces. One section of special appeal shows the development of the locomotive headlight, with original pieces ranging from kerosene-burning bulls-eyes to powerful sealed-beam electric lights.

Throughout the museum many fine railway paintings are exhibited. A large number of these were specially commissioned by the B. & O. for display at the great "Iron Horse Fair" which marked the 100th anniversary of the line. Executed by H. D. Stitt, and other railway artists, several have been widely reproduced as magazine covers, and to illustrate classic books on railway history.

Although the displays are mainly concerned with railroading, many other forms of wheeled transport are represented. These range from rickshaws to Prairie Schooners—the familiar covered wagons of cowboy films. Those canvas-topped wagons spearheaded the westward march of America's railways and could almost be called direct ancestors of the U.S. train.

Scarlet paint, and brightly-polished brass boilers, exemplify the array of nineteenth-century fire engines which breathe the clamour of horse-drawn dashes through the streets of old St. Louis and other frontier towns of the early West.

Occupying a place of honour in this wonderful museum is a pitted iron plate on which can be faintly seen the words "Locomotive No. 1". This plate is one of the few surviving relics of that historic day in England—September 27, 1825—when George Stephenson drove his engine *Locomotion* on the Stockton and Darlington Railway.

It must have been a thrilling sight at the time to see that quaint machine belching smoke as it thundered along the track at 15 miles an hour! (*Cont. on page 227*)

Another Impressive Entrance

Tribute To Jaguar

THE competition debut of the new E type Jaguar at Oulton Park in April—when Graham Hill won the Grand Touring race with one of these fabulous cars, and Salvadori led the field until half distance in another—was as impressive and breathtaking as the first appearance of the E Type at the Geneva Motor Show, in March.





The body of the open 2-seater E Type Jaguar (left), like the coupé, has extremely low drag characteristics, resulting from intensive wind tunnel testing. Below: Fast, elegant and luxurious—the fixed-head coupé version of the new Jaguar E Type Grand Touring model.

By PETER LEWIS

I must admit that when I received an advance notice and pictures of this long-awaited Grand Touring car I immediately classified it as "out of this world".

It can offer performance and handling without equal in its price range of £2,098, and frankly I am of the opinion that it is the best value in the world, whatever the price range. With a top speed of 150 m.p.h., the E Type uses the 3.8 litre engine, a well-tried unit in its most highly-developed form and with a power output of 265 b.h.p. at 5,500 r.p.m.—a figure not far removed from the power output of Stirling Moss's 250 F Maserati in 1954. Yet, this very rapid car has the manners of a family saloon and is so docile that it will pull smoothly from 10 to 140 m.p.h. in top gear. There could be another 30 or 40 b.h.p. available if highly-tuned versions of the 3.8 litre engine eventually become available.

The roadholding and handling is superb and is more than adequate to cope with the performance. This is due largely to the fully independently sprung chassis, and partly to the excellent rack and pinion steering. The Dunlop disc brakes, fitted on all four wheels, are mounted inboard at the rear and outboard at the front. They are well able to cope with a car that can accelerate from 30 m.p.h. to nearly 80 in seven seconds, on leaving a 30 m.p.h. area, and from a standing start to 100 m.p.h. in 15.9 seconds. Gear speeds are 107 in third, 74 in second and 40 in first, while petrol consumption on 100 octane fuel works out at between 19 and 20 m.p.g.

The E Type has been developed from the C and D Type sports-racing cars, but few people realise that the Jaguar organisation came into being 39 years ago when a young Blackpool man, William Lyons, opened a factory for the manufacture of sidecars.

A bigger factory

Very soon, Bill Lyons and his partner were designing and manufacturing special coachwork for cars, and the popular Austin Swallow was one of their most successful efforts. By 1928 a bigger factory was required, and the Swallow Company moved to Coventry where a Swallow Sports was built—the first complete car to be built by William Lyons. The "S.S.", as it was called, created a major sensation at the 1931 Motor Show, and two years later S.S. Cars Ltd. was formed.

In 1935 the first Jaguar saloon was marketed, but my evergreen memory of those days is of the open two-seater sports car—the S.S.100. As its name implied, this fine car—of which a few can still be seen today—was capable of exceeding 100 m.p.h. As has so often been the case with Jaguar announcements, Bill Lyons dropped a bombshell on the motoring world, for his S.S.100 was the first 100 m.p.h. car in regular series production at a price of under £450. Ever since, people have marvelled at the way in which Bill Lyons has given such wonderful value for money.

In 1945 the war in Europe ended, the name of the company was changed to Jaguar Cars Ltd. and Bill Lyons launched an all-out assault on the vital export markets, particularly America. And what a fine record in the post-war years; 64 per cent. of the company's production has been exported, over 50 per cent. of it to America. In the United States, a "Jag" is, understandably, a status symbol.

Then, in 1948, Bill Lyons gave us the X.K.120—a magnificent machine in its day that glistened under the powerful lights at Earls Court and went down in history as the biggest Motor Show sensation since before the war. Within a few months of its appearance the X.K.120 was officially timed over a measured mile at 132.6 m.p.h., a curtain-raiser for an engine destined to win world-wide prestige for Great Britain at a time when our Grand Prix cars were only also rans.

Racing Personalities

SIR WILLIAM LYONS



IN the world of motor-racing it can be tough at the top. No one knows this better than Sir William Lyons, Chairman and Managing Director of Jaguar Cars Ltd. and the Daimler Company Ltd. And yet, the man affectionately referred to by motoring writers as Bill Lyons looks far more like a benign headmaster than the dynamic driving force behind one of Britain's fine cars—the Jaguar.

Always immaculately dressed, he looks typically English, is quiet and reserved by nature and shy of publicity. In a crowded paddock, amid the hustle and bustle before a big race, Sir William can pass unnoticed—and that is the way he likes it. But underneath it all he is a born leader and a man who inspires loyalty and devotion in those who work for him. His executives know him as "The Headmaster", while the men on the production line refer to him affectionately as "the old man".

Born in Blackpool in 1901, and educated there at Arnold School, Sir William Lyons today is every inch a young-in-heart, forward-looking chief, whose recreation —like that of so many high-pressure business men—is golf. Few people realise that he personally decides the lines of his cars and few, if any, of Europe's top designers could improve on the sleek, purposeful lines of a Jaguar. His gift was recognised in 1954 when the Royal Society of Arts appointed him a Royal Designer for Industry. Two years later, the Queen honoured Jaguar by visiting the factory, and William Lyons was created a Knight Bachelor.

The one aim in his life has always been to give not just value for money but unbeatable value for money—a policy that has yielded rich dividends. In his sixtieth year he has done it yet again with the E Type. There are drivers and cars that will live forever in the annals of British racing history, and there are men behind the scenes who have made a tremendous contribution to the epic story of British Racing Green. One of them is Sir William Lyons, a man who has avoided the limelight and got on with the job.

In 1951, at Le Mans, Peter Walker and the late Peter Whitehead drove a 3.4 litre C Type Jaguar to victory in the gruelling 24 hour race, averaging 93.49 m.p.h. and giving British Racing Green its first victory at Le Mans since 1935, when the 4.5 litre Lagonda of Hindmarsh-Fontes won at an average of 77.85.

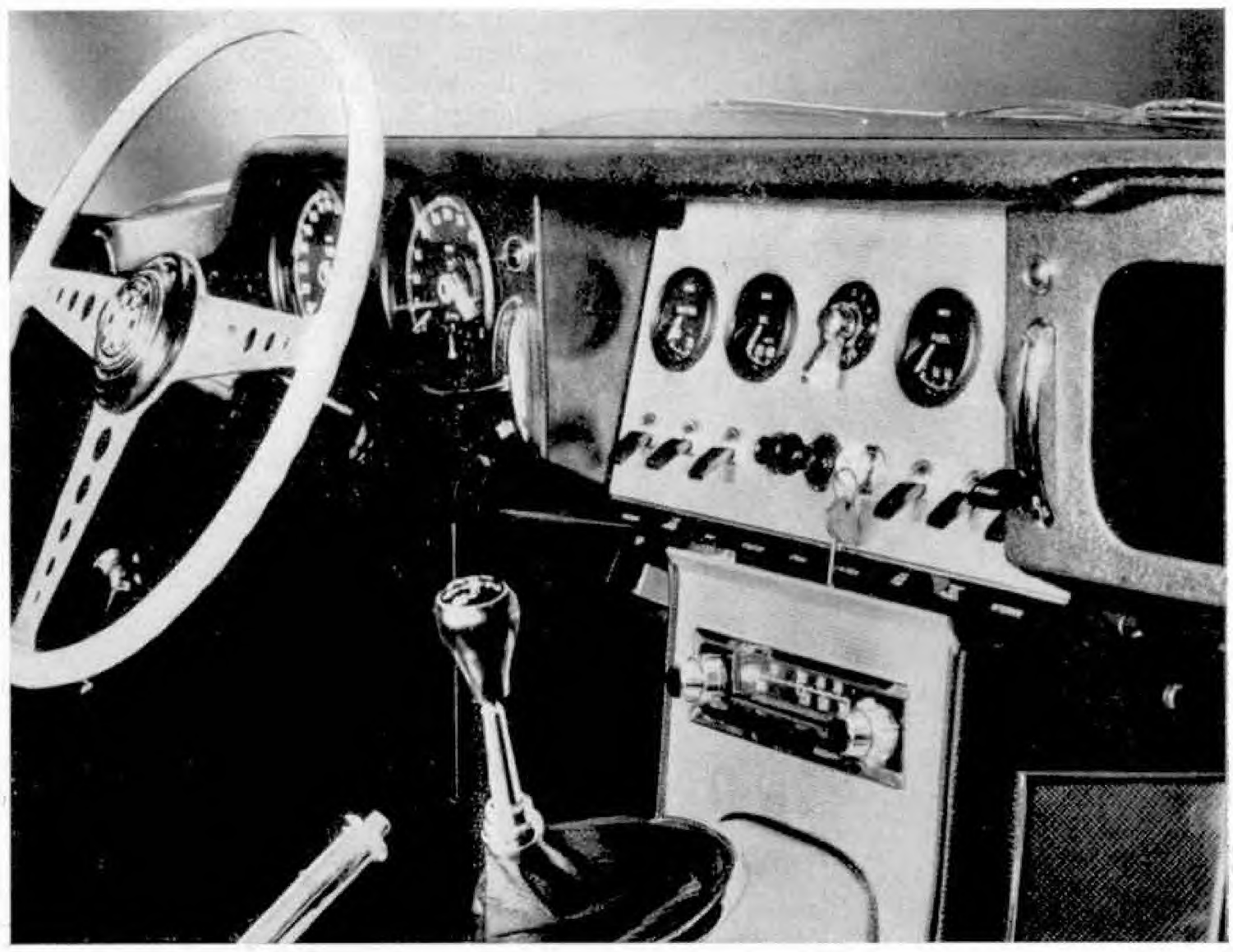
In 1952, Mercedes-Benz won at Le Mans, and then, in 1953, Tony Rolt and Duncan Hamilton gave us another magnificent victory. Once again it was a 3.4 litre C Type, but the winning average was almost unbelievable. For 24 hours Rolt and Hamilton averaged 105.85 m.p.h., nine miles an hour faster than the Mercedes the previous year; twelve miles an hour faster than the two Peters in 1951. Many tens of thousands cheered this Jaguar victory at Le Mans and the world acclaimed the genius of William Lyons.

The will to win

And so it went on. Jaguar victories three years in succession—in 1955, 1956 and 1957—successes that gave Jaguar a total of five wins at Le Mans, equal to the record of Britain's Bentleys before the war.

In 1957, having almost dominated the scene in the sports-car field for five years, Jaguar withdrew from racing. That year a disastrous fire destroyed nearly a third of the Coventry factory. Undaunted, with the same will to win that has been the hallmark of Jaguar, and with every man in the factory making a superhuman effort, Bill Lyons made a remarkable recovery. Within a few months, car production which, incredible as it may seem, had never ceased completely for more than a day, was double what it had been before the fire.

The reason for this is not far to seek. The men who build Jaguars are proud of them, and their loyalty to Bill Lyons is without parallel in the motor industry. Now they have produced another world-beater and they are hoping—as we all are—that the green E Type Jaguars will soon re-enter the fray as a Works team.



The "office" of the E Type Jaguar, a car with ultra-rapid acceleration, high maximum speed and the highest degree of controllability.

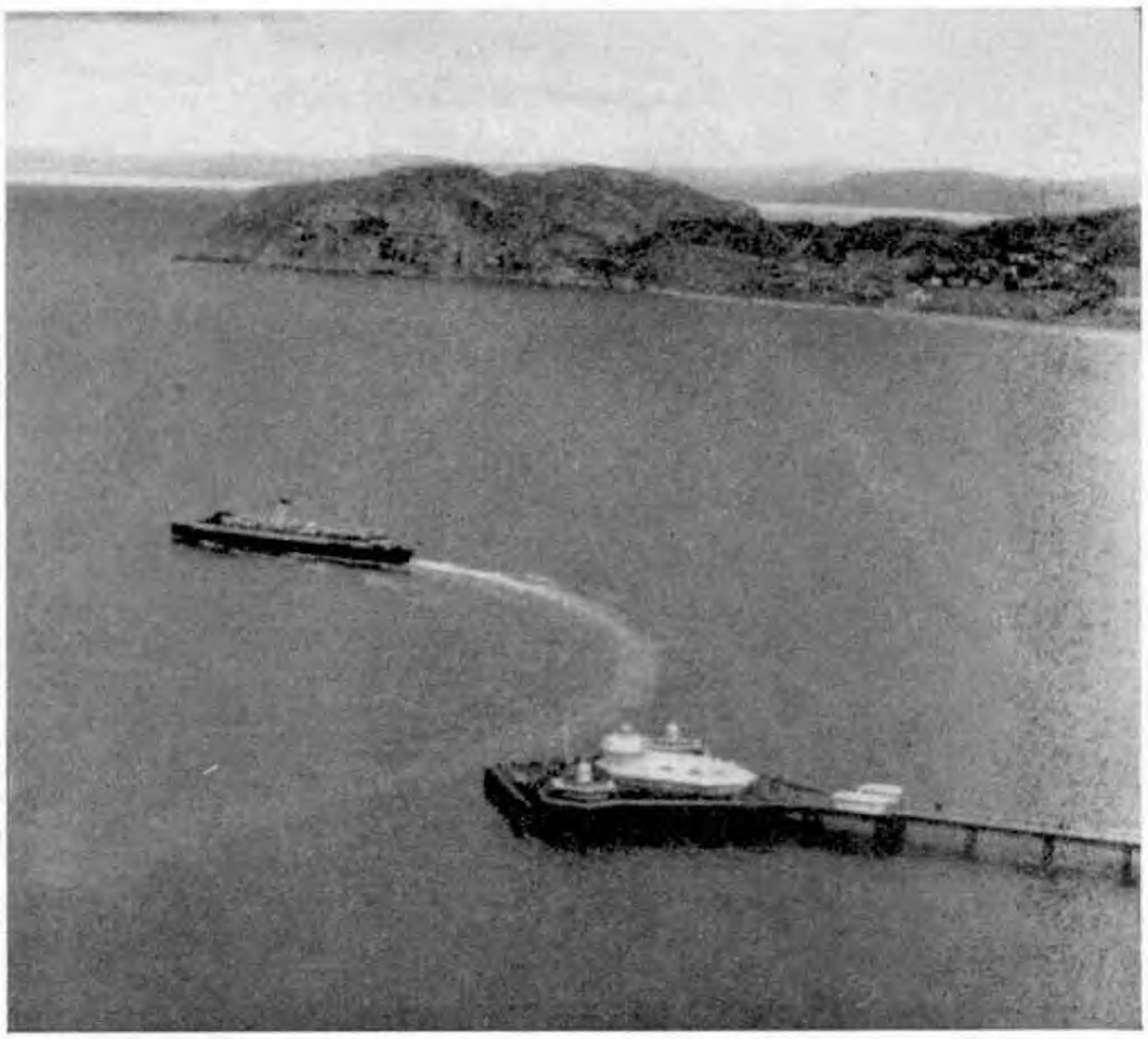
FIRM'S AIRSTRIP NEAR CITY

The United Steel Companies Limited have purchased 108 acres of land near Coal Aston, ten miles to the south of Sheffield, for development as an airstrip for use by the company's aircraft. Town Planning approval has been given to this project and work is now proceeding on the preparation of an 800-yard long grass runway. When completed, it will enable customers and senior executives to reach United Steel's head office in fifteen minutes by car, with about half-an-hour's travelling to the company's steelmaking branches in the Sheffield area.

United Steel purchased their first executive aircraft—a four-seater Piper Apache —in July 1958. Having established the value of this means of transport for conveying customers and senior executives between the company's principal branches in Sheffield, Scunthorpe and Workington, and to other parts of the country, a twin-engined Piaggio P166 was obtained last summer.

PLEASURE STEAMER ST. TUDNO

By Stanley Oliver, G.I.Mech.E., G.I.Mar.E.



EVERY year, thousands of holidaymakers enjoy outings on the pleasure steamer *St. Tudno*, biggest and fastest vessel ever to operate on the Liverpool to North Wales run.

She is one of the fleet of three operated by the Liverpool and North Wales Steamship Company Limited, the others being the *St. Seiriol* and the *St. Trillo*. The third vessel of that name to be operated by the company, *St. Tudno* was completed in 1926 and aroused considerable interest then because of the advanced nature of her design for the type of service on which she is employed.

Built by the Fairfield Shipbuilding and Engineering Co. Ltd., she replaced the paddle-steamer *La Marguerite*.

St. Tudno is a twin-screw, geared-turbine steamer and her principal dimensions are:

Length, overall 329 feet.
Breadth, moulded 44 feet.
Depth, moulded to main deck 13 feet 6 inches.
Depth, moulded to upper deck 21 feet.
Gross tonnage 2,326 tons.
Draught, in service 9 feet.
Speed 19 knots.

The ship's turbines are of Parson's manufacture developing 742 b.h.p. Each set of turbines comprises one high-pressure and one low-pressure turbine driving a propeller shaft through single reduction gearing. Steam is supplied to the turbines from two double-end boilers adapted for the use of oil fuel with forced draught on the closed stokehold system.

The ship is divided into eleven water-tight compartments by water-tight bulkheads. She has two rather short steel masts and one graceful elliptical funnel, nicely raked amidships. A large part of the promenade deck is enclosed, and protection from the weather is afforded by large sliding windows. The shade deck extends from forward of the bridge to within 50 feet of the stern.

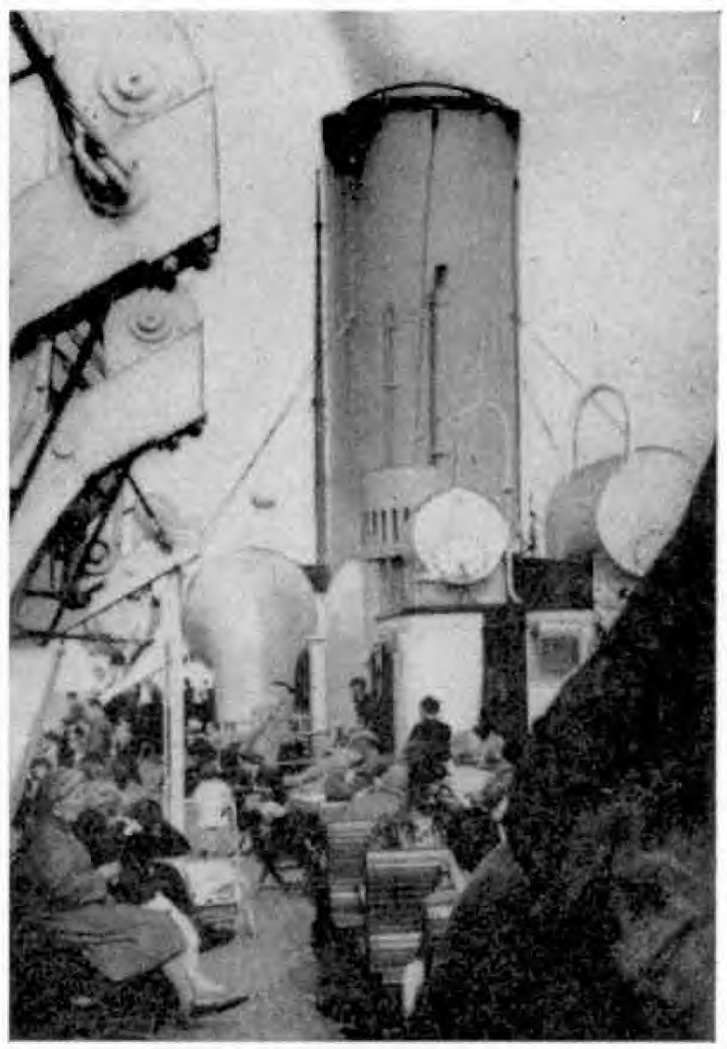
Carries 2,500 passengers

Certified to carry about 2,500 passengers the *St. Tudno* is equipped with six life-boats, each 26 feet long and capable of carrying 47 people, a 16-feet dinghy and numerous life-rafts and buoyant seats. The life-boats are placed under Mac-Lachlan patent automatic davits, which can be operated by one man and the boats lowered into the water in a few seconds.

Launched on February 2, 1926, she made her trial run from the Clyde on April 22 of the same year. On board were directors and officials of the company. The vessel started her career of coastal holiday cruises on May 22, 1926, and operated on the Liverpool–Llandudno–Menai Bridge run until the outbreak of war, except for two excursions from Llandudno to Douglas made in September 1931.

She was taken over for service as an armed boarding vessel on August 27, 1939, until December 4 of that year, and from December 5, 1939 was classed as an Accommodation Ship, at Sheerness, until June 1941. From that date until February 1946 she (*Cont. on page 227*)





The boat-deck—aft. This photograph of the "St. Tudno", and the picture at the top of the page, are by Stanley Oliver.

"The "St. Tudno" is seen below at Menai Bridge Pier. Photograph by courtesy of the Liverpool and North Wales Steamship Company Limited. Above: Leaving Llandudno.

PHOTOGRAPHERS' PAGE

The Golden Rule—Think Before You Shoot

WHEN you press the shutter release on your camera, remember that the camera will faithfully reproduce everything it is pointing at. It records unsightly telegraph poles and dustbins just as easily as a beautiful old thatched cottage. Untidy piles of luggage, porters' trolleys, and that special locomotive you have been waiting to photograph all come out equally well. That is why it is worth while spending a few minutes looking for the best viewpoint, composing the picture and, just as important, choosing the right moment to take the photograph. Think before you shoot is, in fact, photography's golden rule.

Compare first the two pictures on the right. Both are of an attractive old church in Berkshire. In the top illustration a flagstaff, a telegraph pole and even a passing boy cyclist spoil the picture. A few paces forward, and to the right, and a much more satisfactory photograph—as you see from the second illustration—is obtained.

It is worth remembering, too, that sometimes parts of a building make better pictures than the whole. A doorway, part of a wall or a window; such things often lead to interesting and satisfying photographs.

Have you ever noticed that things and people have an annoying habit of always looking bigger when you are actually taking the picture than they do in the photograph? In consequence, many photographers fail to come close enough to their subjects. In our third picture, baby brother has become lost in a confusing mix-up of lawns, houses and the neighbours' washing. How much better to move in closer and, by choosing a higher viewpoint, cut out all the distractions of an untidy background (bottom picture, right).

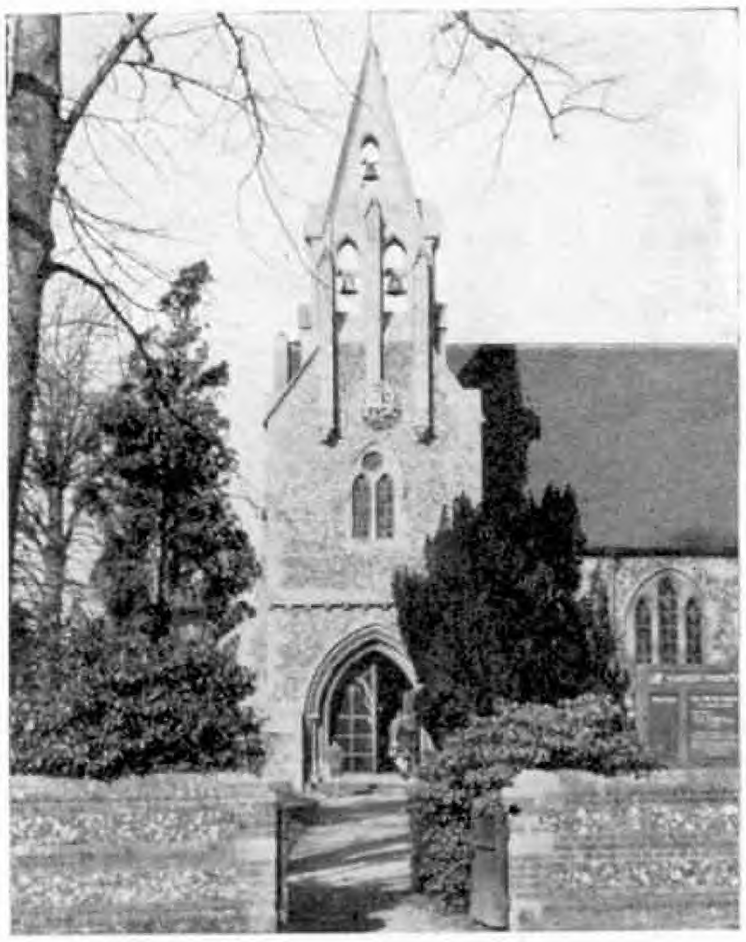
Some box cameras, with fixed focus lenses, will not normally give sharp pictures at distances of less than about ten feet. Inexpensive "portrait attachment" lenses, which fit over the lens of your camera, are available and by using one of these you can come as close as three or four feet. Many camera lenses have positions for portraits, groups and landscapes. Others still can be set for the distance, usually measured in feet, from the camera to the subject. If your lens is adjustable in this way, it is very important to set it to the right position for the subject you are taking, to make sure that your picture is properly in focus.

Taking pictures of people can be fun, and you can make them much more appealing by giving your subject something to do. A friend photographed working on a Meccano model, for instance, makes a better picture than if he were simply shown standing stiffly to attention staring straight into your lens.

Next month, we shall be talking about photographing moving objects.

—H. G. FORSYTHE









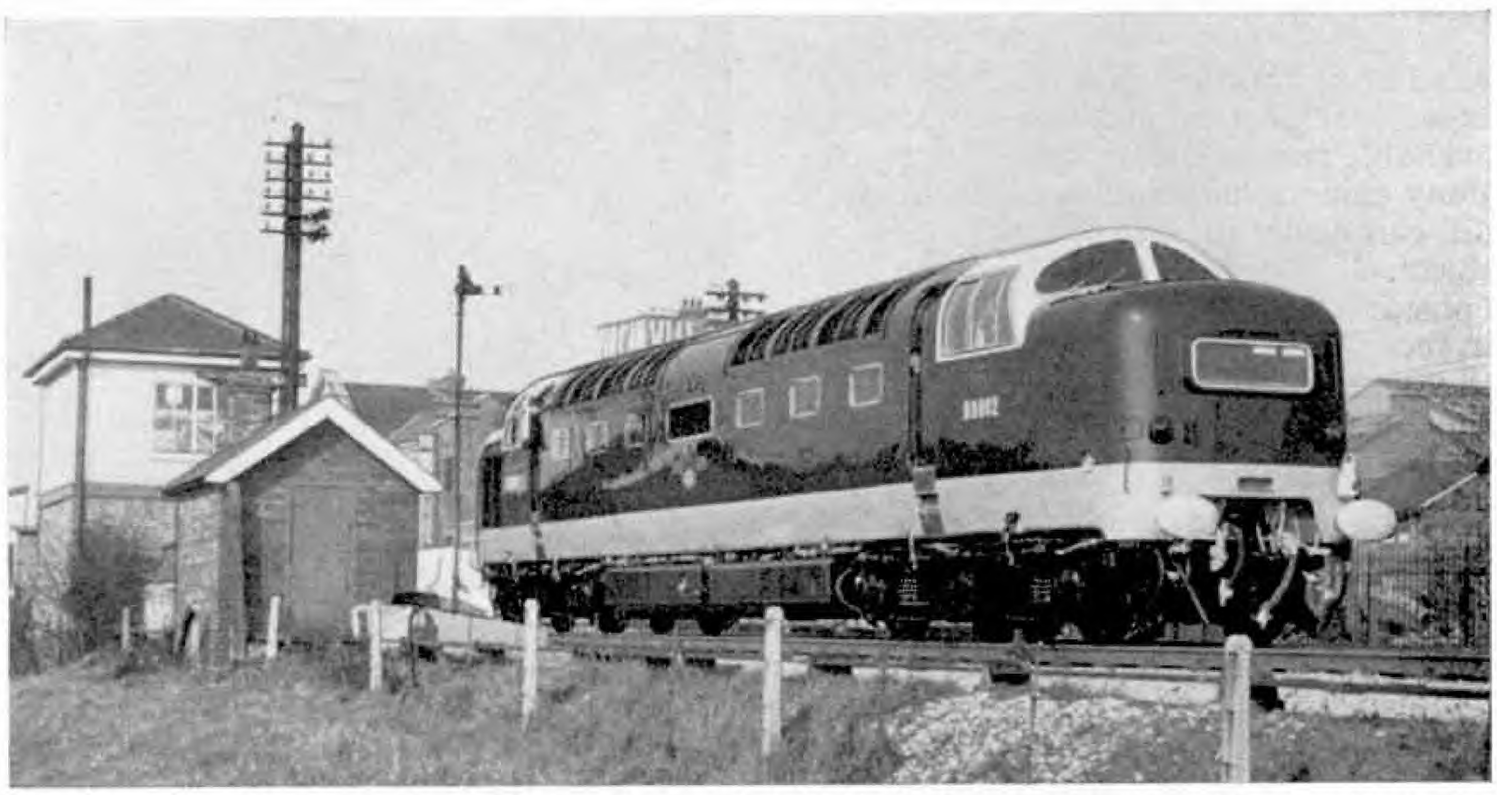


RAILWAY NOTES

Contributed by R. A. H. Weight

SOME NEW LOCOMOTIVE TYPES

IN the course of years, there have been in service, on British lines, several experimental turbine-driven locomotives employing different forms of fuel, transmission and auxiliary traction, and of varying design as regards external appearance. The ex-L.M.S. 4–6–2 "Turbo-motive" latterly numbered 46202, and the W.R. gas-turbine units numbered 18000 and 18100, will be the more recently remembered, although none of those is now in service.



Type 5 diesel-electric locomotive D.9002 was here approaching Vulcan Bank Signalbox, after emerging newly-completed from Vulcan Foundry, when caught by the camera of E. N. Bellass.

The English Electric Company Ltd. has now completed on its own initiative, at the Vulcan Foundry Works, Newton-le-Willows, Lancashire, a handsome-looking gas-turbine-mechanical 4–6–0, based on a steam-type locomotive frame and coupled to a six-wheeled tender of streamlined type. Its number is GT3. The locomotive is designed to develop 2,750 horsepower, employs direct mechanical drive, and is intended for express or mixed traffic duties. At the time of writing trials are being made along various L.M.R. routes.

The engine units are enclosed by external casing. Very considerable power is produced by a method that can be briefly described as follows: Air is drawn into a compressor consisting of six axial stages and one centrifugal; then, heated by compression, it passes through trunking to the stainless steel heat-exchanger. It is further heated therein by exhaust gases and enters the combustion chamber, where a portion is again heated by the combustion of injected fuel oil. The resultant mixture of expanding hot gases actuates the turbine driving the centre coupled axle through a specially-designed gearbox. Locomotive and tender are painted light brown, with dark green and orange lining.

The first of the Co–Co type 5 diesel-electric main line locomotives intended for East Coast express services between London, King's Cross, and Edinburgh, Waverley, etc., forming part of a standard new class, are numbered D9000–2. As I write they are undergoing trials while driver training and other preparatory tasks go on. Emanating from the same Shops as GT3, these new machines, one of which is illustrated this month, are of 3,300 horsepower rating, and appear to be decidedly the most powerful regular-service locomotives in this country, with speed capacity of 100 m.p.h. as well as high accelerative and uphill power. This design is based on that of the English Electric *Deltic* locomotive that has been running, with some notable performances, for several years on B.R. main lines.

Recently completed additions to the Warship series of diesel-hydraulic W.R. 2,200 horsepower B–B, main line locomotives are numbered and named as follows: Nos. D840–4, respectively *Resistance*, *Roebuck*, *Royal Oak*, *Sharpshooter*, *Spartan;* No. D866, *Zebra*.

WESTERN RUNNING

Here are details of some journeys on the Western Region. To mention the more modern motive power first, No. D603, *Conquest*, had an easy task with the eight-coach winter load, weighing about 300 tons in all, on the principal-stations Devon and Cornwall to Paddington express due there at 2.50 p.m., actually running in at 2.44, having covered the last 36 miles of almost level track from Reading in 37¾ minutes start to stop, including a track repair slowing and maxima of 80 m.p.h. around Maidenhead and Slough. From the previous stop at Taunton the 106¾ miles to Reading were covered in 114 minutes, with time in hand in spite of four extra speed reductions. The good steady running did not need to be so fast as on the occasion, for instance, of my fine *Torbay Express* run over the same course, reported in the August 1960 *M.M.*, with time to make up and a heavier train more sharply scheduled.

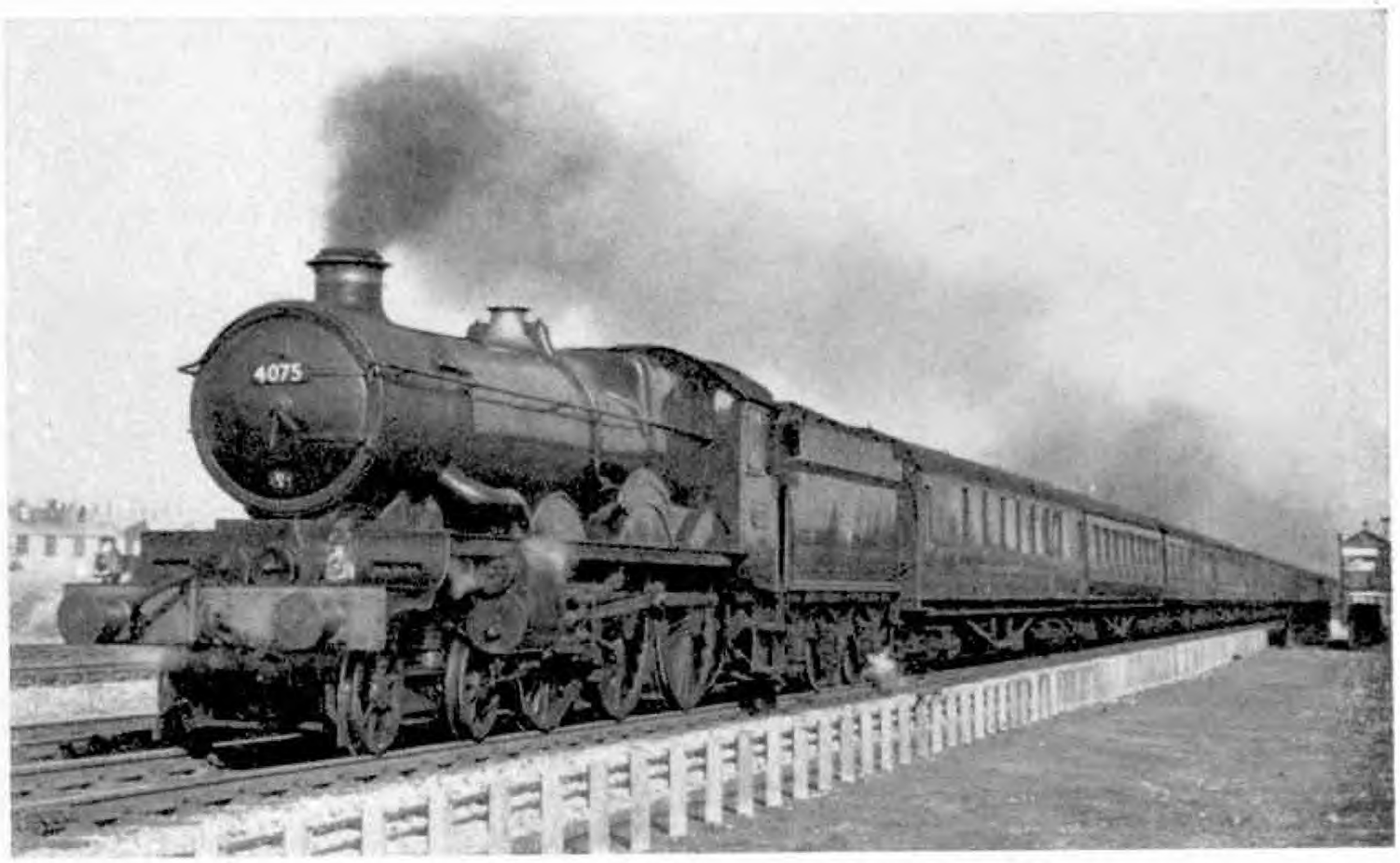
Along the same main line, at a busy time in the evening, quite a heavy first-class and restaurant car special, such as is run regularly—with others at times rather less exclusive—in connection with Newbury Races, in Berkshire, was returning to Paddington with "13-on", well filled, and weighing some 470 tons in all, headed by D807, *Caradoc*. Time allowed was one hour for the 52½ miles from Racecourse platforms on the London side of Newbury Station itself. There was a four-minute stop seven and a half miles from the start

owing to some apparent defect, but all was found to be well before the journey was resumed, although some eight minutes had been lost. After the usual cautious passage of Reading curves and station, the 36 miles to Paddington were covered in 34 minutes, with an arrival only three minutes behind time.

Turning now to the successful and long-familiar Castle 4-cylinder steam 4–6–0s built at Swindon in batches from 1923 to 1950, there is news first of a "flying" run a little time ago, from Paddington to Exeter in 2 hours 44 minutes—that is 164 minutes for the 173½ miles—by No. 7000, *Viscount Portal*, averaging 70 m.p.h. for a good deal of the way after Savernake, with the eight-coach *Torbay Express*. The allowance then, requiring an average of over 60 start to stop, was 172 minutes. Since then seven minutes have been taken off providing a 2¾ hour schedule for the first time (similar to the passing time at Exeter of the *Cornish Riviera Express* with heavier load), and the haulage has been turned over to the Warship diesel locomotives. London departure time also has changed from 12.0 to 12.30 p.m., so coming into line with the other day-time West of England expresses, leaving at 9.30, 10.30, 11.30 (summer), 1.30, 3.30.

No. 5069 commemorating on its nameplates, in full, the famous early engineering pioneer *Isambard Kingdom Brunel*, and also with "8-on" (or about 290 tons gross) did not run so fast, nor did it attain maxima higher than 74 m.p.h., yet it reached Taunton, the first stop, almost two minutes early on a Paddington to Torquay and Plymouth express. The 142¾ miles were covered in 146 minutes, or well under the two and a half hours. Past the bridge reconstruction work at West Drayton there was a crawl that lasted for a long while, as well as two other track repair slowings in the first 18 miles.

Heavily loaded, No. 4099 *Kilgerran Castle*, working the 8.55 a.m. through from Paddington to Swansea with a full 13-coach train, totalling about 475 tons behind the tender, was able to improve on the 115-minutes, start-to-stop allowance between Reading and Newport which includes a margin for delays, especially with a lighter train. The last 33½ miles from Badminton, Glos., 100 miles from London and at the top of a gradual rise, were the most lively, with a rapid descent to the long Severn Tunnel wherein 75 m.p.h. was sustained, followed by a good climb, at 44 m.p.h., up the steep ascent from the tunnel on the Welsh side. Mr. D. S. M. Barrie, M.B.E., logged four of the runs now mentioned and kindly forwarded details.



No. 4075 "Cardiff Castle", the prototype of a well-known Hornby-Dublo Locomotive, making good progress past White Waltham with a Paddington to Bristol and Weston-super-Mare express. Photograph by R. J. Blenkinsop.

ALTERED SHED CODES

A number of changes recently occurred in the code numbers and letters of Motive Power Depots in South Wales and the West Midlands. The principal new indications, as usually carried on locomotive smoke-box door plates, include: Shrewsbury 89A; Hereford 86C; Kidderminster 84G; Gloucester, Barnwood, ex-Midland, 85C; Bromsgrove 85D; Cardiff, Canton, main line, 88A.

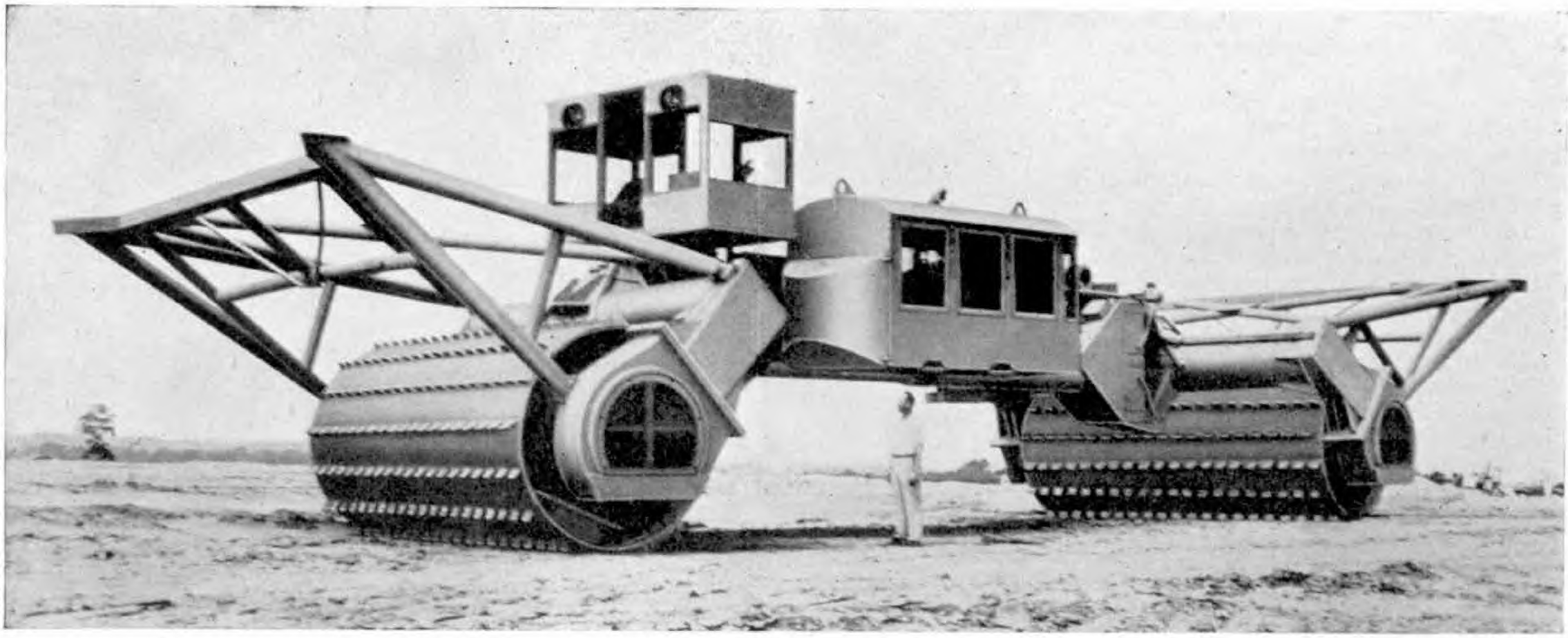
FOOD TRANSIT FROM SPAIN

Remarkable progress is reported by the "Transfesa" organisation controlling the carriage of fruit and vegetables, largely in refrigerated vans, from Spain to European countries, including 69,000 metric tons to England during 1960. The vehicles are fitted with interchangeable axles to overcome the difference in gauge between the slightly wider Spanish standard and that used in most other European countries including Britain—approximately 4 ft. 8½ in. The average load per wagon arriving by Train Ferry ship at Dover, for example, varies from 14–20 tons.

The impressive new railhead and market for Continental fruit and similar traffic opened last year at Hither Green, in South London, alongside the S.R. Dover–Charing Cross main line, is reached from the Kent ports by fast freight trains. These will soon be hauled by electric locomotives throughout, and also steam or diesel, as now. So an international combined operation using several railway systems as well as sea transit, and often requiring complete special trains for the land stages, brings tomatoes, grapes, potatoes, citrus fruits and so on, in prime condition, from Spain to our markets within a few days.



Along the South Devon coast. The "Cornish Riviera Express" with diesel-hydraulic No. D813 "Diadem" at its head passes out of Parson's Rock Tunnel, west of Dawlish. Photograph by J. C. Beckett.



Giant Tree-Crushers Tackle The Toughest Jungles

By John Westbury

ANY machine or device which enables farmers and foresters to clear their scrubland or bush quickly and cheaply for productive purposes is indeed welcome these days, even if the machine is so costly that it can be owned and used only on a co-operative basis. Such a machine is the new Tree-Crusher recently developed by the Le Tourneau Company, this machine being a smaller version of the G-series of tree-crushers introduced earlier for widescale jungle clearance.

These machines are clearly destined to play a significant role in world food production, particularly in those regions where literally millions of acres are non-productive because of the enormous expenditure of time and money required to clear them of scrub or worthless jungles.

U.N. statistics reveal that world population is increasing at a rate now in excess of 125,000 a day. Perceive what this means in terms of food. It is equivalent to the springing into sudden existence every day of a new city of 125,000 people somewhere in the world—and every one of its inhabitants will be hungry. Many will stay hungry, but sooner or later they will *demand* food. . . . .

How ironical and how incongruous it is, then, for the wealthier nations to send food and clothing to people who are actually living on much richer soil—soil which could be astonishingly productive *if* it were cleared and drained.

It is in anticipation of this ever-growing need that these tree-crushers have been developed. Through their use, millions of new acres can be quickly and economically prepared for food crops, pastures, reservoirs and tree farming, as well as communications. Their significance in such areas as Africa, South America, Asia and Australia, where a single clearing project may involve 100,000 acres or more, can be instantly comprehended.

Because of the magnitude of such projects, the first tree-crushers (the G-series) were built to tackle the toughest jungles, such as those on which these machines are currently working in Liberia, Peru and Venezuela.

Irresistible power

An eye-witness has described how this gigantic machine, some 74 feet long, 22 feet wide, and nineteen feet high, uses its massive weight and irrestible power while at work: "Like a harnessed tornado chewing its way through a forest", he writes, "the jungle-wrecker rips huge trees up by the roots, slaps them to the ground, then literally smashes them into splinters."

Working its way through a jungle, the tree-crusher behaves like a gigantic steam roller, leaving a 20-foot path of matted pulp and splinters behind it. It has proved its enormous strength by wrecking giant oaks twelve feet in circumference—and without straining. It can clear an acre of land every fifteen minutes.

Yet, it requires only one man to operate it. Perched in a cab high above the rollers, he uses simple push-button type controls to feed power to the machine, and to steer it.

When operating in rough country, in heavy timber or in sandy terrain, positive steering provided by big electric gear-motors gives the tree-crusher remarkable manœuvrability. For instance, if the machine is clearing timber and brush of a less dense character the operator, if he so desires, can steer the giant rollers to work almost side by side, thereby doubling the swath width.

To work this 150-ton juggernaut, with its massive 20-foot rollers, obviously requires enormous power. This is provided initially by a 600 h.p. diesel engine driving a generator, the electricity from which is fed to gear-motors located at all points of power application.

Compact design

Experience gained in using this initial (G-series) machine showed that, in some areas at least, a smaller machine which could be easily transported from one job location to another would be more useful. So the 47-ton tree-crusher was constructed, compactly designed so that it could be

The enormous size of the jungle crusher is clearly demonstrated by its height in comparison with that of its operator, who can be seen in the picture. Axe-like cleats on huge steel rollers splinter trees and underbrush into a mat-like pulp.

shipped completely assembled, with the exception of one part which is easily and quickly removed.

Under trial, the experimental test model was used on unproductive scrub forests in North Carolina and Mississippi. In the former, and working under rough conditions including 30 per cent slopes, the new tree crusher averaged an acre of land every 21 minutes. Working on level cut-over areas with hardwood stands, the machine averaged an acre every seventeen minutes. In the Mississippi region, where conditions were less difficult, figures were even better.

This new 400 horsepower electric tree-crusher, self-propelled like its predecessors, is 37 feet long, 12 feet high, and has two rollers 12 feet wide and of 5 foot diameter. It is these heavy, blade-studded steel rollers which smash the trees into splinters once they have been pushed to the ground. It is claimed that these cutting blades disrupt root life and, therefore, offer a high percentage of root-kill. This, added to the fact that the destroyed trees and other vegetation, formed into a compressed mat by the tree-crusher, can be burned as soon as dried, provides a relatively high degree of clearance.

It follows, of course, that the trees and other growth being cleared by this means are not suitable for lumber or pulp-wood. Once such unproductive land has been cleared, it attains a new value, for it can then be put to use either for food production or reforestation, as a building or as a reservoir site. Such land becomes most useful.

It is interesting to note, also, that the tree-crushers, being electrically-operated, do away with gear changes (which can be tricky in hilly terrain). Their speed varies between the merest forward movement and an upward limit of three miles an hour.

Finally, what about the working costs of this new machine? In the United States these are estimated to work out, on average, at 3.50 dollars for each acre cleared. This compares very favourably indeed with costs of 9 to 12 dollars an acre for the same job carried out with bulldozers, dynamite and other conventional methods. (*Cont. on page* 227)



A tree-crusher is seen here tackling an area of unproductive forest land. The machine's operator is in the cabin on top, and in the right foreground is the job foreman.

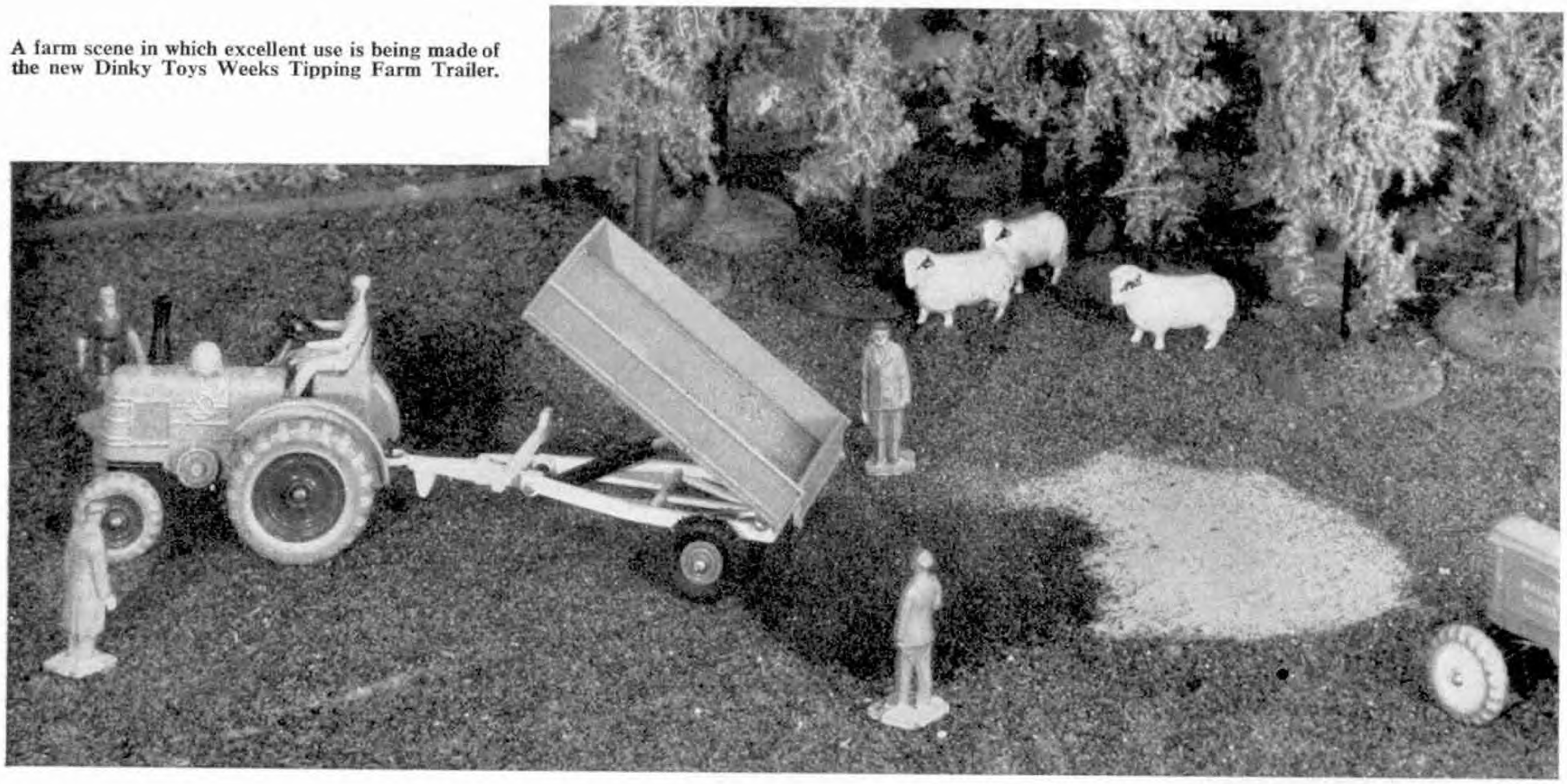


This "small" electric tree crusher is very compactly designed. Like other machines of this nature its specific purpose is to reclaim land at present made valueless by scrub.

DINKY TOYS NEWS

BY

THE TOYMAN



A farm scene in which excellent use is being made of the new Dinky Toys Weeks Tipping Farm Trailer.

Farm Trailer With Tipping Action

WHEN I thought about providing the main illustration for this month's Notes I considered a problem which, I must confess, I have often pondered over in regard to the sort of scenes that Dinky Toys enthusiasts like to build up with their models. The question is this: If you lived in the country, would you tend to create the sort of scene that you would see at the seaside, and if—like myself—you lived within hailing distance of the sea, would your normal impulse be to create a scene such as that which you would see inland? I decided this probably would be the case and so, for my picture this month—particularly since the summer, with its long, light nights is here—I had in mind the creation of a country scene.

In that scene I have been able to incorporate the latest Dinky Toys model to be released to the shops. It is the Weeks Tipping Farm Trailer (No. 319 in the Dinky Toys list) and you can see from the photograph above, and the close-up picture of the same model at the top of the next page, that it is indeed a very attractive item. It is one further addition to the range of farm implements which figure in the wide array of Dinky Toys models and it will, I know, bring a good deal of happiness to quite a number of people who have written to me asking for a vehicle of this nature.

Hinged tailboard

The body of the trailer, which has a hinged tailboard, is finished in a deep red gloss, and the chassis in a bright yellow. The tipping action is hand-operated but has an authentic air because of the imitation "hydraulic" ram provided. This is the sort of model which can be loaded and unloaded to provide endless hours of entertainment.

The actual prototype is manufactured by Weeks and Co. (Engineers) Ltd., of Wincolmlee, Hull, and it is known as the Type F112S. It is ten feet long by six feet wide with a loading height of 2 ft. 9 in. The sides of the trailer, made of pressed steel, are eighteen inches high and the vehicle's overall height when the tipper is operating is 11 ft. 4 in., with an unladen weight of 15 cwt. Its load capacity is three and a half tons.

The Dinky Toys Trailer is $4\frac{1}{8}$ in. long by $1\frac{7}{8}$ in. wide and the front of the vehicle rises to a height of about four inches when the tipping ram is operated to its fullest extent.

Handy towing bar

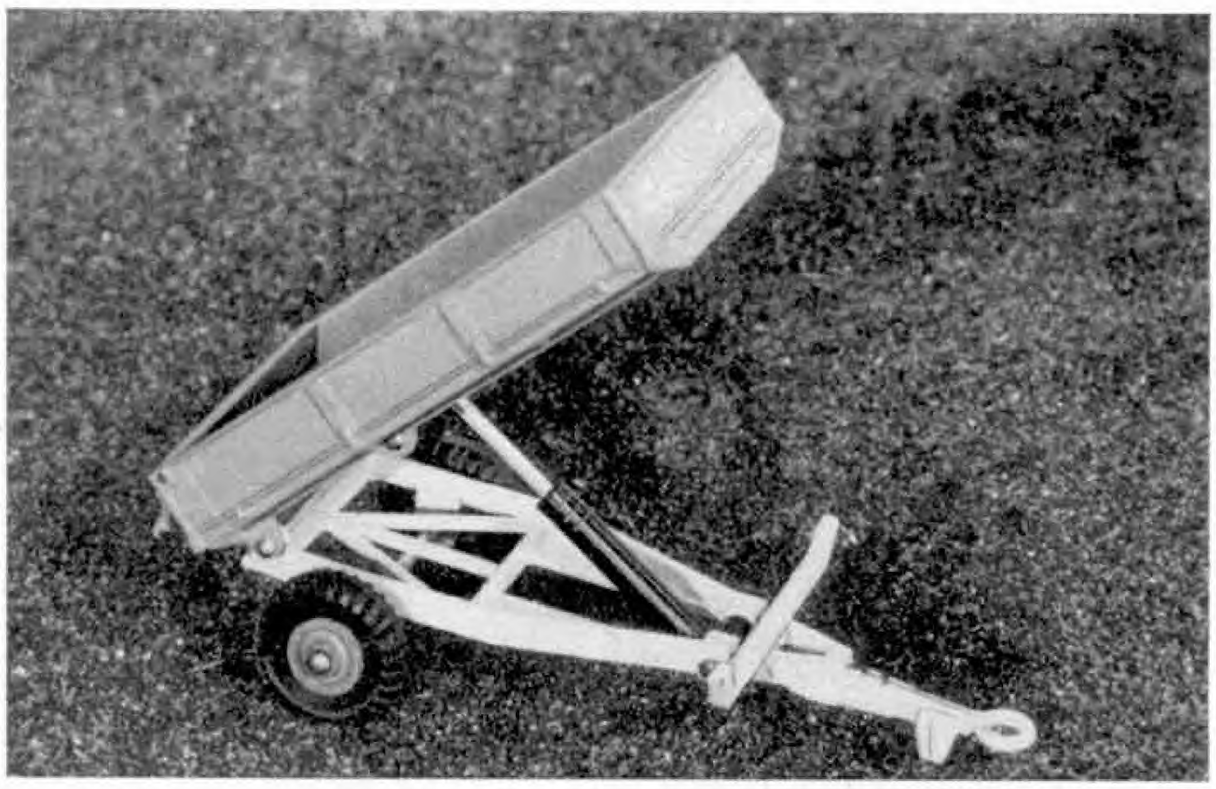
The handy towing bar on the Trailer means that it can be attached to any Dinky Toys model which carries a towing hook, but naturally it looks most realistic behind one of the two agricultural tractors in the present range of Dinky Toys. These are the Massey-Harris Tractor (No. 300)

and the Field Marshall Tractor (No. 301) which is the Tractor in use in our main picture.

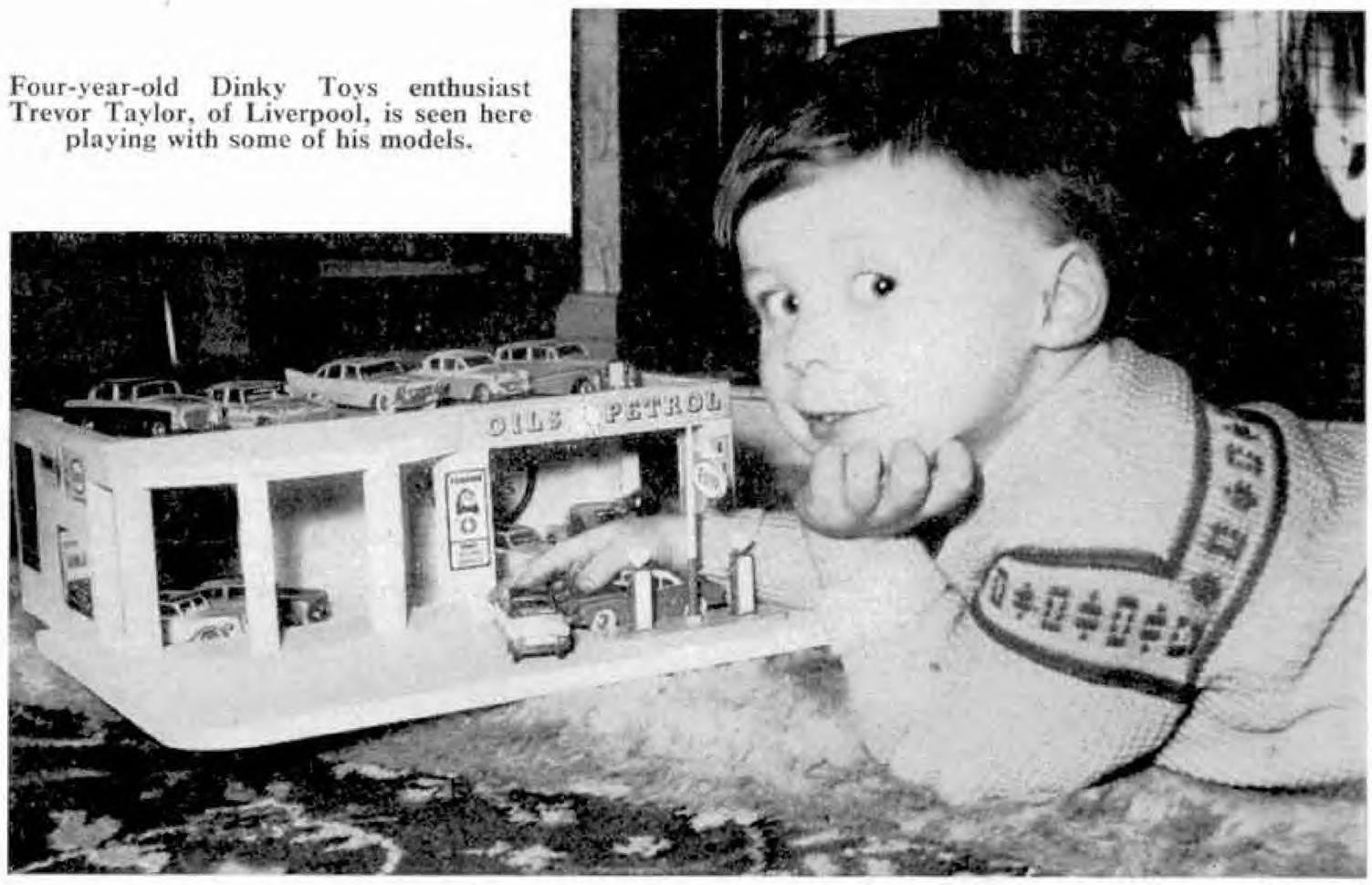
The scene portrayed there is one which might well take place on a farm. In one of the fields is a pit which the farmer has decided to fill in, and he is using a Weeks Tipping Farm Trailer to carry earth, bricks and other materials for use on the job. You can see how much extra work would have been necessary if he had not had this useful vehicle among his equipment. It would have meant the busy employment of shovels for a long period, whereas with the Tipping Trailer much time and energy can be saved. I imagine that many of our readers who are enthusiastic about modelling scenes will find this quite a useful layout to follow.

And now I would like to draw your attention for a moment to the picture in the centre of this page, in which you see Trevor Taylor, a very young collector of Dinky Toys, who lives in Liverpool, with some of his models. Although I receive many photographs from readers it is not often that I come across one quite so informal as this, yet with such appeal. Other interesting pictures of Dinky Toys collectors will be found on the next page.

Finally, the Secretary of the Dinky Toys Club informs me that quite a number of members are writing to ask him if he is able to identify old Dinky Toys models. He and the members of his staff at Binns Road will always do their best to identify models of bygone years, but it is sometimes the case that full details cannot be provided because of damage done to records during the last war. When inquiries of this nature are made, a drawing or recognisable sketch of the model should be sent, but NOT the model itself.

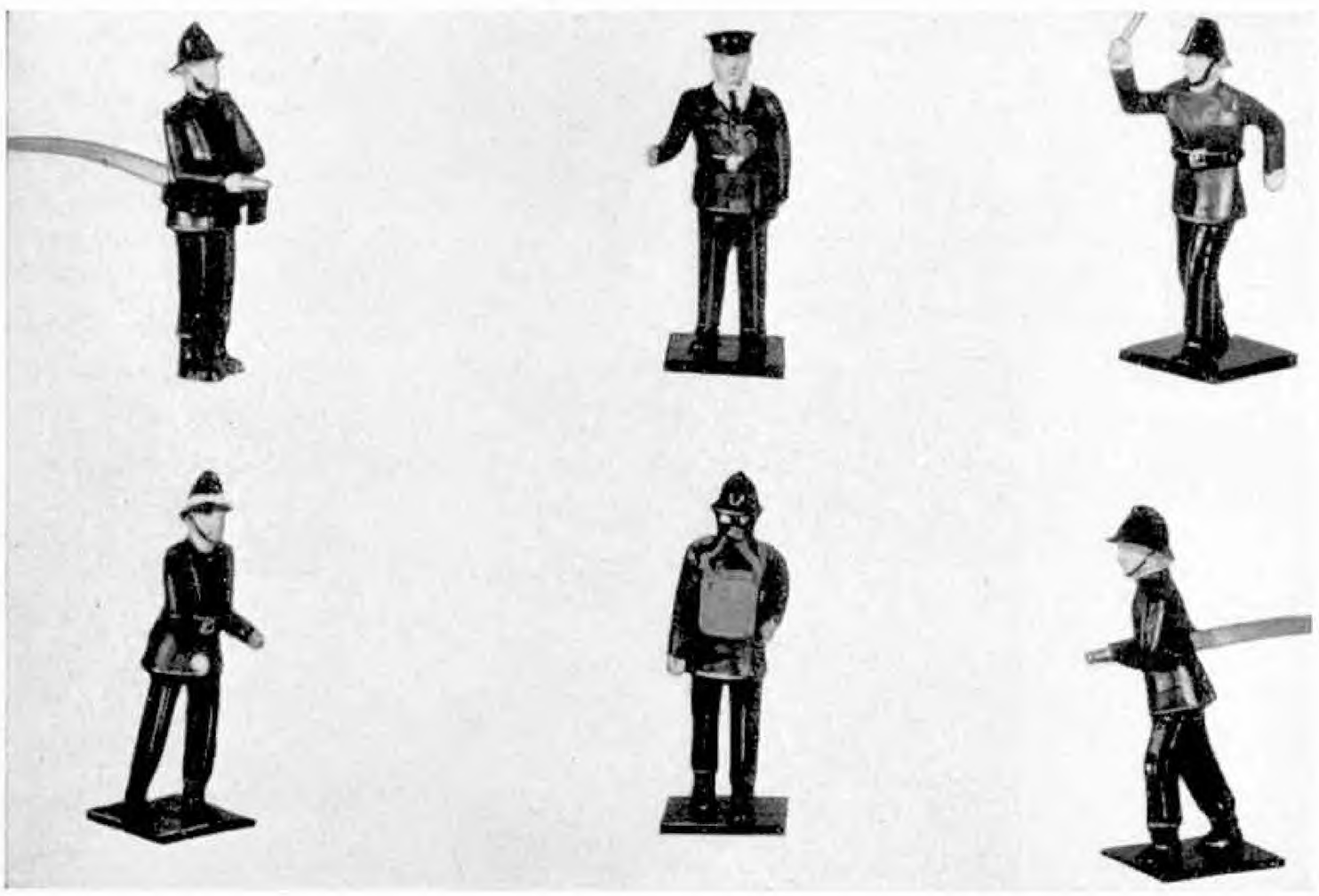


Another view of Dinky Toys No. 319 Weeks Tipping Farm Trailer showing the imitation "hydraulic" ram by means of which the tipping is operated.



Four-year-old Dinky Toys enthusiast Trevor Taylor, of Liverpool, is seen here playing with some of his models.

Dinky Toys Firemen



Pictured on the left are the six miniature figures which form the attractive set listed as Dinky Toys No. 008 Fire Station Personnel. When it was decided to produce these figures the Chief Design Draughtsman of Meccano Limited, together with a photographer, visited the Fire Training Centre at Garston, Liverpool, to photograph actual firemen there in fire-fighting kit. The figures, which are moulded in plastic and meticulously detailed, are based on the photographs taken on that occasion and the information provided by the authorities there. The set consists of a Station Officer (with peaked cap), a Leading Fireman (with white band round his helmet), a fireman with an axe, a fireman with breathing apparatus and two other firemen with branch connections for hoses. One of these is standing and the other is provided with a safety belt so that he can be placed on a ladder such as those to be found on the Dinky Toys Fire Engine with Extending Ladder (No. 955) and the Turntable Fire Escape (No. 956). Included in the set are two lengths of hose to fit to the branches carried by these two firemen.



Dinky Toys collectors in Rugby, and members of the Dinky Toys Club, are Richard Smith of Narborough Road South (right) and his friend John Wilkinson.



Among recent winners of the Dinky Toys £2 monthly award are Terry Turner of Eltham, London. pictured above with his dog Rex, and below, Bryan Reece of Dagenham, Essex (left), and Ronald Smyth of Pomeroy, County Tyrone (right).



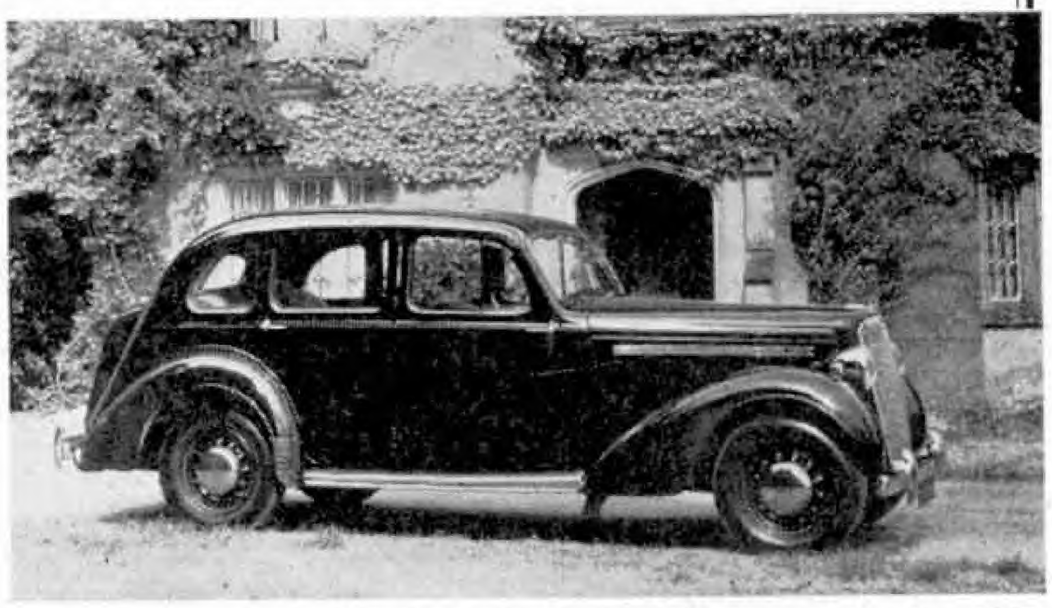




Enjoying a sail on the Gallowslake, Antwerp, is M. Verschueren, of Ghent, Belgium, also one of the monthly £2 award winners.

THEY WERE DIFFERENT THEN

No. 4. The Humber Hawk



The Phase II Humber Hawk of September 1947.

THE name Humber goes back to 1867 when Thomas Humber founded the firm which originally made cycles at Coventry. Some thirty years later, at the first motor exhibition in Britain, the company introduced their first cars—two Humber-Pennington tandem "safeties", with a Kane Pennington engine mounted behind the rear wheels, and two Humber tricycles.

Humber's first motorised four-wheeled vehicle was made in 1899. Named the MD Voiturette, it was a quadricycle powered by a 2¼ h.p. De Dion engine and had front-wheel drive and rear-wheel steering. The famous Humberette followed soon after-

By PATRIC BAKER

wards. This was powered by a 5 h.p. single-cylinder engine with four speeds and reverse—quite an innovation for the period. Among other "modern" components of the Humberette was a radiator which could be swung aside to gain access to the engine, a single-spoke steering wheel, and control levers on the steering column. Later on, a V-twin engine was fitted and the car remained a best seller until the early years of World War I. Humber products made around this time included the 8½ h.p. Humber Beeston, which had a two-cylinder engine, and bigger 14 h.p. and 25 h.p. four-cylinder models with four-speed gear-boxes.

Probably the most memorable Humber of its age was the 1910 12 h.p. model—one of the first British four-cylinder cars of this capacity to be produced at a popular price. It cost £300 and was designed by a young Frenchman, Louis Coatalen, then at the beginning of a brilliant career in the British motor industry.

After the first world war, the policy at Humber's remained one of quality first. The 15.9 h.p. Humber of 1921, for example, which sold for £1,330, was particularly well equipped. It had such refinements as a full range of instruments, a dashboard drawer, ash trays, spring-loaded windows and an electric horn. These items are taken for granted nowadays, but in the early '20's even a speedometer was often classed as an extra.

In 1928 the brothers W. E. and R. C. Rootes acquired the controlling interest in the Humber concern, which now included the Hillman and Commer companies. This was the beginning of the Rootes Group, soon to become one of Britain's leading motor manufacturers.

The benefits of the merger were made plain in the Snipe and Pullman models introduced in 1930. These fine vehicles had a performance equal to anything in their class and were among the first British cars to be designed for export as well as for the home market. Other well-known Humber models of the 1930's included the 12 h.p. "Vogue" series and the Super Snipe, whose 27 h.p. six-cylinder engines provided a maximum speed of over 80 m.p.h.

In World War II the Humber Company built thousands of staff, scout and armoured cars for the Allied Forces. Its most famous

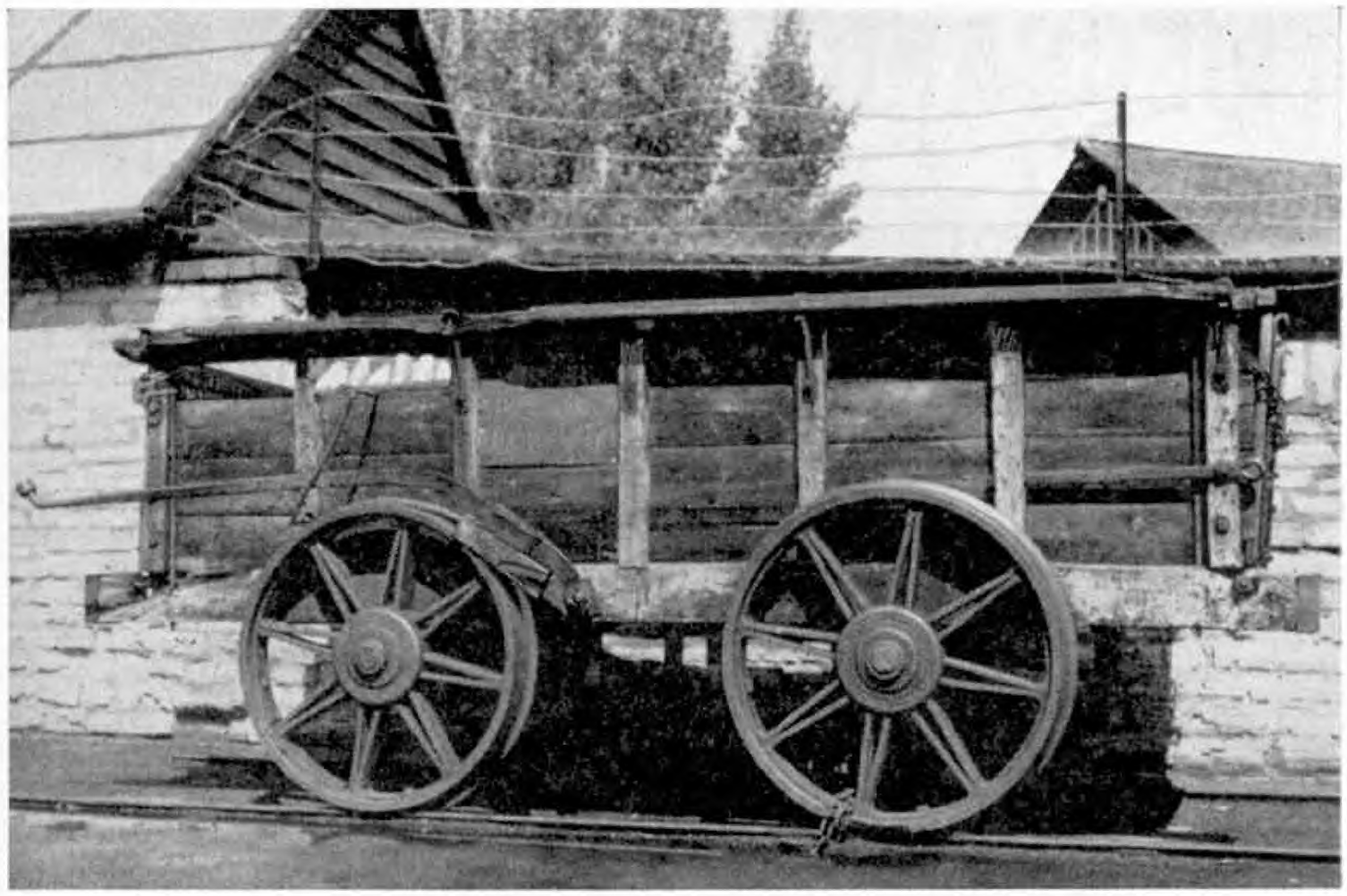
(Continued on Page 227)



The Humber Hawk saloon as it appears today.

Of General Interest

AN EARLY RAILWAY WAGON



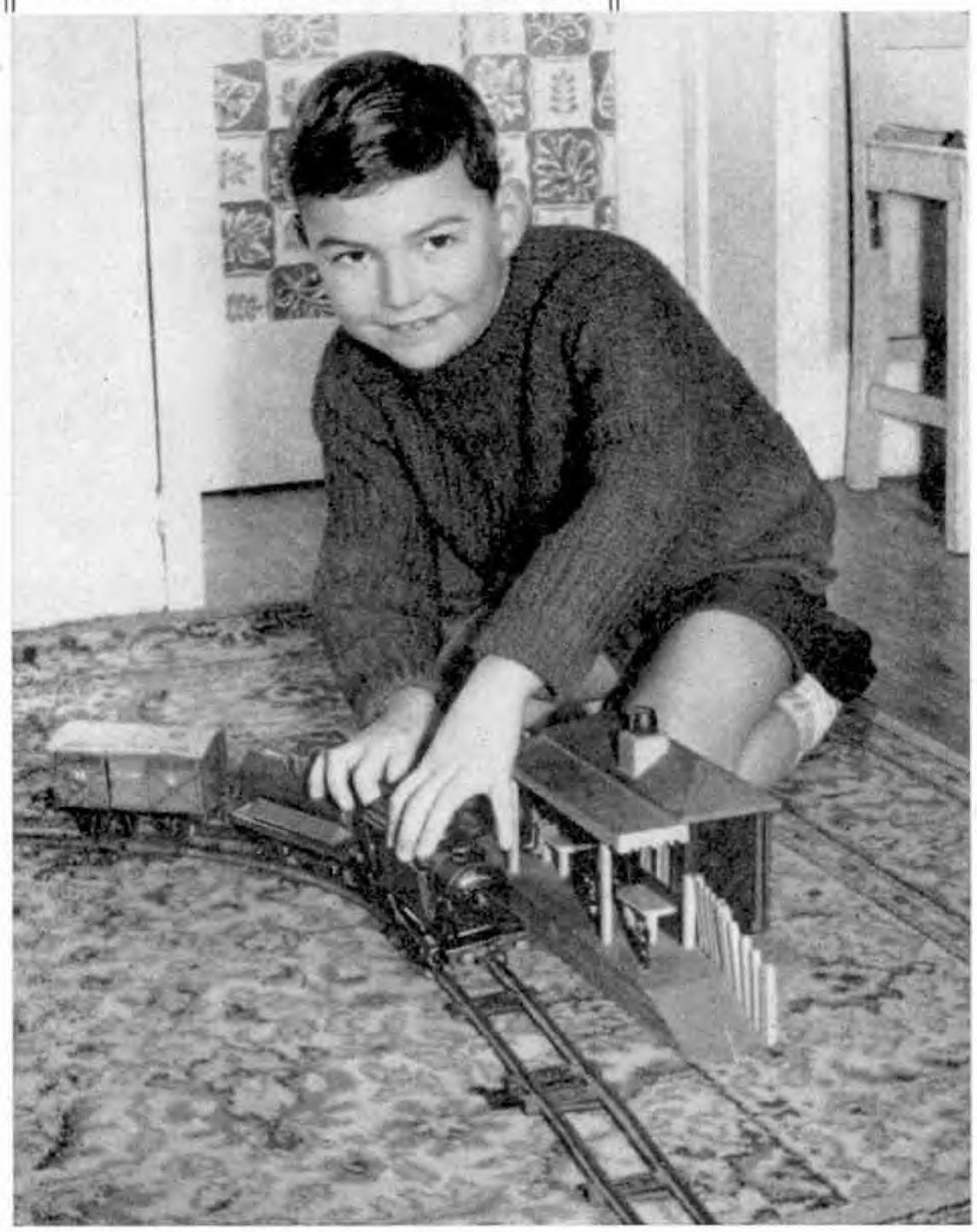
THE ancient wagon shown in the illustration (right) by Leslie E. Wells is the last surviving item of rolling stock of the Stratford and Moreton Railway. It was for many years employed as a chicken house with a roof and higher sides built upon it, and was so used until 1935 when it was saved from the scrap heap by Mr. F. C. Wellstood, then Secretary of the Trustees and Guardians of Shakespeare's birthplace, who persuaded the corporation to have it mounted at the site of the old terminus from which it used to make its journeys between Stratford-on-Avon and Moreton-in-Marsh Lime Works.

The Stratford and Moreton Railway, of 4 ft. gauge, with horse haulage, was constructed by Thomas Telford, of road building fame, and opened in 1826. It was the only public railway Telford built. The railway was projected by William James as part of an ambitious scheme to connect the canal system of the Midlands with London, but only the Stratford to Moreton section, with a branch to Shipston-on-Stour, was actually constructed. The rails were laid on stone blocks.

The line had fallen into disuse by 1881 and part of the track was re-built into a branch line by the Great Western Railway. The remaining rails were consigned to France during the first World War, but the ship on which they were being carried was lost in the Channel, and they never reached that country.

The wagon was built in Liverpool by Smith and Willey, whose foundry was at the corner of Smithdown Lane and Falkner Street, and it now stands near the north end of the bridge over the River Avon, at Stratford. In faded lettering on the side of the wagon is the inscription, "Thomas Hutchings, Newbold Lime Works".

Train From The 1930's



The picture which appears on the left takes us back to the winter months—to last Christmas, in fact.

Seven-year old Marc Arnold of Boundary Road, Walmer, Deal, had just about everything a boy could want on that wonderful occasion—books, toy soldiers, and chocolates among them—but he wanted a train.

Going into the loft his father, Mr. Tony Arnold, came across a clockwork train he had played with as a youngster—a Hornby Train, in fact. Out from the musty recesses of the loft came two locomotives and three or four items of rolling stock. There was a good supply of track, too, and a level crossing. And finally, there was a small wooden station which one of Mr. Arnold's friends had bought when the train set was new.

* * * *

They had been in the loft since 1935, yet a flick or two from a duster brought the sheen back to the paintwork and the locomotives themselves needed absolutely no attention. They were simply wound up and off they went, as if they were new.

The locomotives actually date back to 1931 and Marc's mother, Mrs. Rita Arnold, described both engines and rolling stock as "a tribute to the maker".

MECCANO WALL CLOCK

A Simple, Weight-Driven Time-Keeper

I HAVE received many requests during the past few months for details of Meccano clocks, and there seems to be an increasing number of model-builders interested in this type of mechanism. Actually it is of course possible to build many different kinds of clocks from standard Meccano parts, and these include wall and mantle clocks and weight-driven grandfather type clocks.

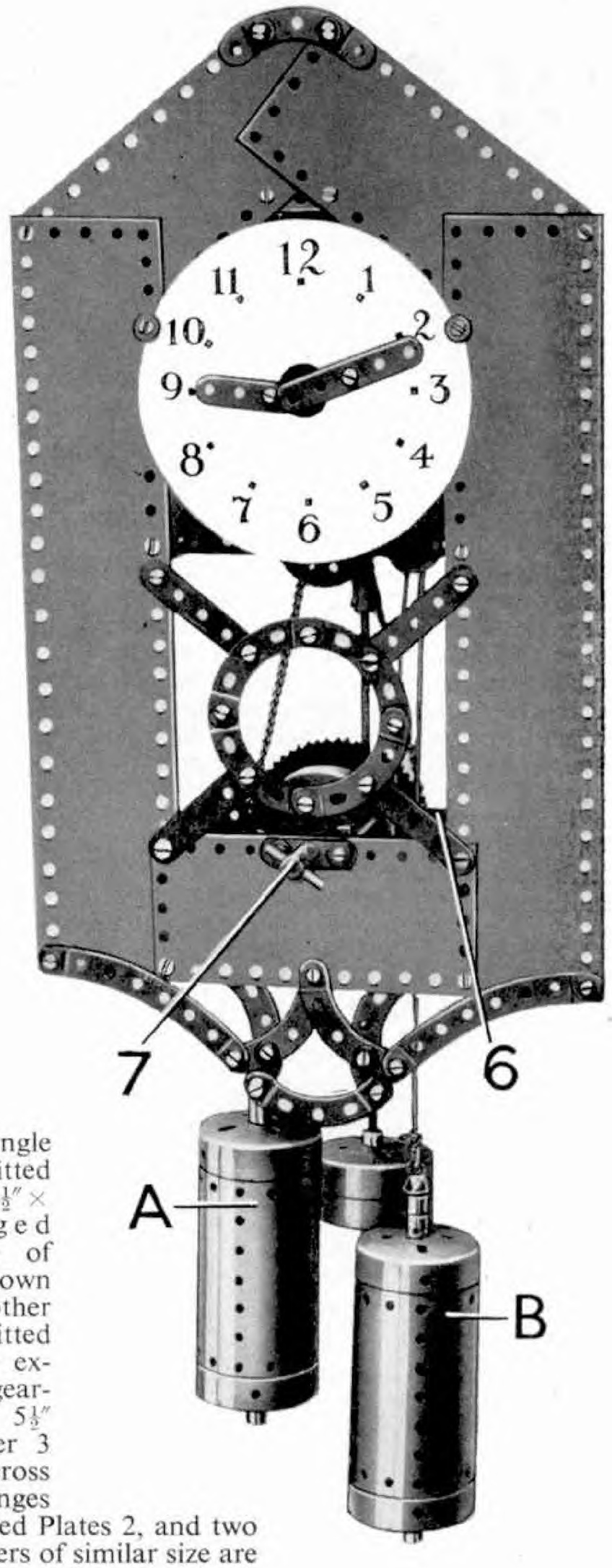
In view of the requests I have received I have decided to include again this month details of an attractive weight-driven wall clock that was first illustrated and described in the *Meccano Magazine* some years ago. The younger generation of model-builders will not have seen this model, and I hope therefore that they will find it attractive and will want to build it.

The clock is quite simple in construction and will interest specially model-builders who have only a limited supply of Meccano parts at their disposal.

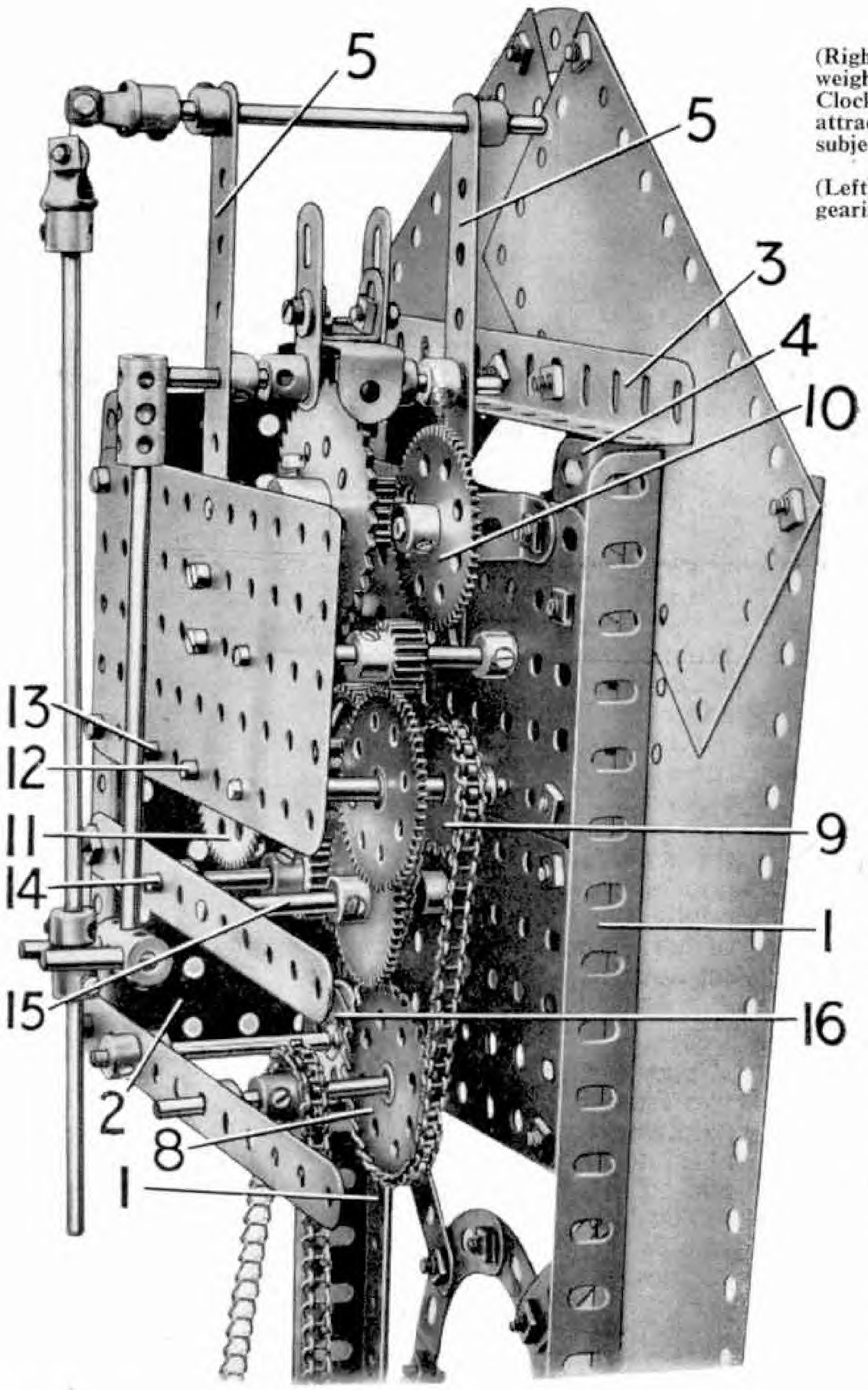
The frame is formed from two 12½″ Angle Girders 1 fitted with two 5½″ × 2½″ Flanged Plates, one of which is shown at 2; the other has been omitted in order to expose the gear-train. A 5½″ Angle Girder 3 is bolted across the upper flanges of the Flanged Plates 2, and two further Girders of similar size are bolted to the inside edge of each Plate. One of these Girders is shown at 4, and they both form supports for two 4½″ × 2½″ Flat Plates. One 5½″ × 2½″ Flat Plate and two 5½″ Strips are bolted between the two rear flanges of the Plates 2, Fig. 2. Two 4½″ Strips 5 are fitted as shown.

Two 12½″ × 2½″ Strip Plates are secured to the Girders 1, and bridged at the bottom by a 5½″ × 2½″ Flexible Plate. At the top two 5½″ × 2½″ Flexible Plates are fitted as shown in Fig. 1, and connected together at their upper corners by a 2½″ small radius Curved Strip. Decorative work is added to the bottom of the clock and this is formed from five 2½″ small radius Stepped Curved Strips, and two 4″ Stepped Curved Strips.

The lower ends of the Girders 1 each carry a 2½″ × 2½″ Flat Plate, the outer edges of which are fitted with 2½″ Angle Girders. The flanges of these Angle Girders point inward, and at their upper ends they are bridged by a duplicated 5½″ Strip, a portion of which is shown at 6, Fig. 1. Two Double



(Right) Fig. 1. This weight-driven Wall Clock provides an attractive and useful subject for model-builders.
(Left) Fig. 2. The gearing of the Wall Clock.



Arm Cranks are now fitted to form reinforced bearings, and one of these is secured to the centre of the 5½" Strip 6. The other is bolted to the lower 5½" × 2½" Flexible Plate as shown.

The winding barrel consists of two Wheel Flanges and two Face Plates, bolted together by two ¾" Bolts to form a large diameter drum. The boss of one of the Face Plates is turned inward so that it is accommodated inside one of the Wheel Flanges, and the complete winding barrel is mounted on a 3½" Rod that carries also a Ratchet Wheel and a 3" Sprocket. The Ratchet Wheel is locked on the 3½" Rod, with its boss pointing to the back of the model. The Sprocket Wheel, which is free to turn on the Rod, is mounted in a similar manner, but is spaced from the Ratchet Wheel by a Washer. In one of its outer holes a Pivot Bolt is secured, and on this is carried a spring-loaded Pawl. The front end of the 3½" Rod carries a Coupling 7 fitted with a 1½" Rod that forms the winding handle.

The 3" Sprocket drives, through a

By SPANNER

length of Chain, a ¾" Sprocket Wheel mounted on the same Rod as a 1½" Sprocket 8. A second length of Chain connects the Wheel 8 with the Sprocket Wheel 9, which is mounted on a 3" Rod together with a 57-teeth Gear that meshes with a ½" Pinion locked on the same Rod as another 57-teeth Gear. This last Gear is carried on the front end of its Rod immediately behind the clock face, and is in engagement with a ½" Pinion mounted on the same Rod as the Gear 10. The Rod is carried at one end in a bearing formed from a Double Bent Strip. A ½" Pinion on the escapement Rod is in constant mesh with the Gear 10.

The gears that transmit the movement from the minute hand to the hour hand are now fitted. The Rod bearing the Sprocket 9 is fitted with a ½" Pinion that meshes with a 57-teeth Gear 11 on the Rod 12. This Rod is 3½" in length and carries the minute hand at its outer end. At its centre is a ¾" Pinion, meshing with a 50-teeth Gear on the Rod 13, and also a 1" Gear that engages with a similar part on the Rod 14 that carries also a second ¾" Pinion. This Pinion drives a 50-teeth Gear on the Rod 15, on the front end of which is a ½" Pinion. A 57-teeth Gear, which is free to turn on the Rod 12, meshes with this latter Pinion, and is fitted with a ½" Reversed Angle Bracket. This part is bolted to the 57-teeth Gear and it protrudes through a hole in the centre of the clock face. A 1½" Strip represents the hour hand.

The escapement is a 2" Sprocket Wheel mounted on the final shaft of the clock drive. The pallet is built up from a 1½" × ½" Double Angle Strip attached by two ½" × ½" Angle Brackets to two Cranks. The Angle Brackets are bolted together to form a double bracket, and the Cranks are locked on the ends of two short Rods carried in the Strips 5. The method of mounting the crutch and pendulum will be clear from the illustration. Care must be taken when adjusting the ends of the Double Angle Strip, and the exact position of the lugs in relation to the escapement wheel must be gauged very accurately.

The pendulum is built up from one 8", one 11½" and one 3½" Rod joined together by Couplings, and is suspended by means of two short lengths of flexible steel wire held in an End Bearing. The "bob" consists of two Boiler Ends suitably loaded. The driving weights A and B shown in Fig. 1 are formed from Boilers suitably loaded, and are attached to the driving cords by End Bearings. The cord from weight A is taken to the drum, round which it is wound in an anti-clockwise direction. The cord from B passes over the Pulley 16 and is wound anti-clockwise on the drum.

Parts required to build the Meccano Wall Clock: 4 of No. 2; 2 of No. 2a; 1 of No. 6a; 2 of No. 8; 3 of No. 9; 2 of No. 9d; 2 of No. 12; 1 of No. 13; 1 of No. 13a; 3 of No. 16; 1 of No. 16b; 1 of No. 18a; 2 of No. 25; 5 of No. 26; 2 of No. 27; 3 of No. 27a; 2 of No. 31; 60 of No. 37a; 60 of No. 37b; 1 of No. 45; 2 of No. 48; 2 of No. 52; 2 of No. 53a; 2 of No. 62; 2 of No. 62b; 3 of No. 63; 1 of No. 70; 2 of No. 72; 2 of No. 89b; 6 of No. 90a; 40" of No. 94; 1 of No. 95; 1 of No. 95a; 1 of No. 95b; 1 of No. 96a; 2 of No. 109; 2 of No. 111; 1 of No. 120b; 1 of No. 125; 2 of No. 137; 1 of No. 147a; 1 of No. 147b; 1 of No. 148; 2 of No. 162; 2 of No. 162a; 2 of No. 166; 3 of No. 192; 2 of No. 197; Short length of flexible steel wire.



BOOK REVIEWS

British Aircraft of World War II

(Ian Allan, 2/6d.)

Recently published in the series of ABC books is *British Aircraft of World War II*. The book, by K. G. Munson, gives full details of 27 of the major aircraft of the war, and briefer details of 40 aircraft which played a lesser, yet nevertheless very important, role in the fighting. All the descriptions include striking photographs of the aircraft concerned, together with brief technical details. At the back of the book is a list of experimental and less significant operational aircraft produced during the war years. The author has included a chapter devoted to a survey of Britain's aircraft and air power between the years 1918 and 1939, and a review of the part played by British aircraft in the European and Pacific theatres of war.

* * * *

Railway Knowledge

The Railway Correspondence and Travel Society have recently produced a second edition of Part Eight of their publication *The Locomotives of the Great Western Railway*. Its theme is *Modern Passenger Classes* and, like previous R.C.T.S. publications, it provides a great deal of most useful and accurate information. Its general style and presentation follows that of the original 1953 edition. Numbers, names, building dates and so on are listed, together with many other details, and there are plenty of illustrations. Copies can be obtained, price 9/- each, from the R.C.T.S., Hon. Publications Officer, Mr. N. J. Claydon, 19 Dene Court Road, Olton, Solihull, Warwickshire.

New A.A. Foreign Guide for Drivers

The motorists of Great Britain are travelling further and further afield for their Continental holidays. To meet this trend, the 1961 edition of the Automobile Association's Foreign Touring Guide has been extended to include Finland, now one of Europe's top twenty touring countries.

The 40 pages of easy-to-read road maps have been revised, and places where there are A.A. hotels have been given a special symbol. In addition, the telephone numbers and addresses of accommodation bureaux in France are given. Altogether the new guide contains details of more than 5,700 appointed hotels (300 more than last year), 114 motels and 1,350 garages.

A Working Model From Outfit No. 5

MECCANO TOWER CRANE

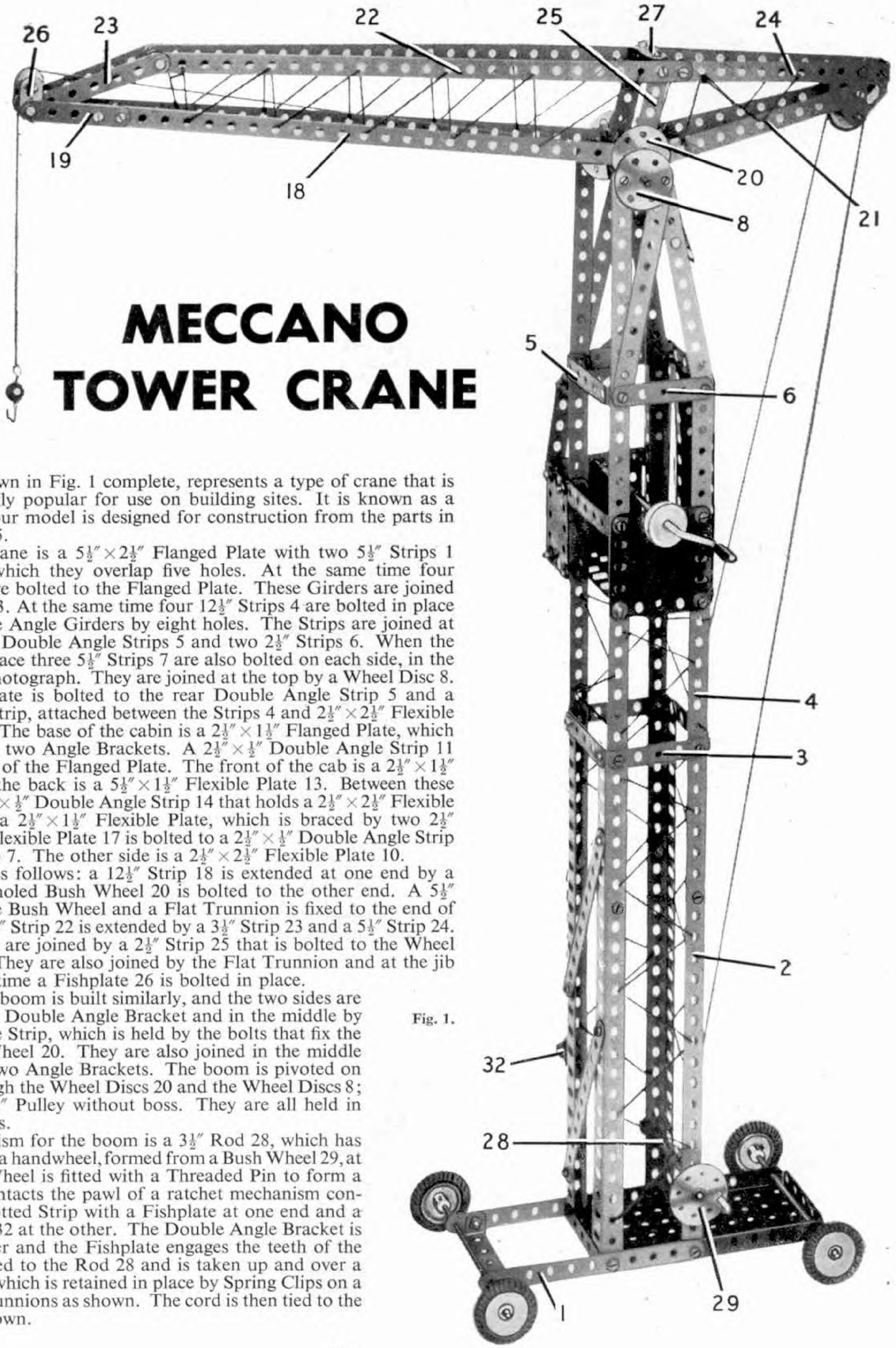


Fig. 1.

THE new model, shown in Fig. 1 complete, represents a type of crane that is becoming increasingly popular for use on building sites. It is known as a Tower Crane, and our model is designed for construction from the parts in a Meccano Outfit No. 5.

The trolley of the crane is a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate with two $5\frac{1}{2}''$ Strips 1 bolted to its flanges, which they overlap five holes. At the same time four $12\frac{1}{2}''$ Angle Girders 2 are bolted to the Flanged Plate. These Girders are joined at the top by $2\frac{1}{2}''$ Strips 3. At the same time four $12\frac{1}{2}''$ Strips 4 are bolted in place so that they overlap the Angle Girders by eight holes. The Strips are joined at the top by two $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 5 and two $2\frac{1}{2}''$ Strips 6. When the Strips 6 are bolted in place three $5\frac{1}{2}''$ Strips 7 are also bolted on each side, in the manner shown in the photograph. They are joined at the top by a Wheel Disc 8. A $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate is bolted to the rear Double Angle Strip 5 and a second Double Angle Strip, attached between the Strips 4 and $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate 9, is fixed inside. The base of the cabin is a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flanged Plate, which is fixed to the tower by two Angle Brackets. A $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 11 is then fixed to the side of the Flanged Plate. The front of the cab is a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate 12, and the back is a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate 13. Between these two Plates is fixed a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 14 that holds a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate 15. The roof is a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate, which is braced by two $2\frac{1}{2}''$ Strips 16. A $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate 17 is bolted to a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip and is fixed to the Strip 7. The other side is a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate 10.

The boom is made as follows: a $12\frac{1}{2}''$ Strip 18 is extended at one end by a $2\frac{1}{2}''$ Strip 19; an eight-holed Bush Wheel 20 is bolted to the other end. A $5\frac{1}{2}''$ Strip 21 is bolted to the Bush Wheel and a Flat Trunnion is fixed to the end of the Strip. A second $12\frac{1}{2}''$ Strip 22 is extended by a $3\frac{1}{2}''$ Strip 23 and a $5\frac{1}{2}''$ Strip 24. The two built-up Strips are joined by a $2\frac{1}{2}''$ Strip 25 that is bolted to the Wheel Disc 20 and Strip 22. They are also joined by the Flat Trunnion and at the jib head, and at the same time a Fishplate 26 is bolted in place.

The other side of the boom is built similarly, and the two sides are joined at each end by a Double Angle Bracket and in the middle by a $1\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip, which is held by the bolts that fix the Strip 21 to the Bush Wheel 20. They are also joined in the middle by a $1\frac{1}{2}''$ Strip 27 and two Angle Brackets. The boom is pivoted on a $3\frac{1}{2}''$ Rod passed through the Wheel Discs 20 and the Wheel Discs 8; the Rod also holds a 1" Pulley without boss. They are all held in position by Spring Clips.

The winding mechanism for the boom is a $3\frac{1}{2}''$ Rod 28, which has a Pinion at one end and a handwheel, formed from a Bush Wheel 29, at the other. The Bush Wheel is fitted with a Threaded Pin to form a handle. The Pinion contacts the pawl of a ratchet mechanism consisting of a Formed Slotted Strip with a Fishplate at one end and a Double Angle Bracket 32 at the other. The Double Angle Bracket is lock-nutted to the tower and the Fishplate engages the teeth of the Pinion. Cord is attached to the Rod 28 and is taken up and over a 1" Pulley with boss 30, which is retained in place by Spring Clips on a $1\frac{1}{2}''$ Rod held in Flat Trunnions as shown. The cord is then tied to the rear of the tower as shown.

The mechanism for raising and lowering the hook is a 3½″ Crank Handle with grip 31 joined to a 2″ Rod by a Rod Connector and held in place by a 1″ Pulley and a Spring Clip. The cord is tied to the Crank Handle and is passed over the Pulley on the pivoting Rod and then over the ½″ Pulley without boss that is held by Spring Clips on a 1½″ Rod journalled in the Fishplates 26.

Two 5½″ Strips are bolted to the front of the tower to act as bracing girders. The Strips 1 are then joined one hole from their ends by a 2½″ × ½″ Double Angle Strip. A 5½″ Rod is journalled in the Strips and a second one in the Flanged Plate. They are held in position by Spring Clips and the travelling wheels are mounted on them.

Parts required to build the Tower Crane: 8 of No. 1; 14 of No. 2; 2 of No. 3; 12 of No. 5; 1 of No. 6a; 4 of No. 8; 4 of No. 10; 3 of No. 11; 12 of No. 12; 2 of No. 15; 2 of No. 16; 1 of No. 17; 2 of No. 18a; 1 of No. 19g; 5 of No. 22; 2 of No. 22a; 1 of No. 23; 1 of No. 24; 2 of No. 24a; 2 of No. 24c; 1 of No. 26a; 13 of No. 35; 98 of No. 37a; 96 of No. 37b; 20 of No. 38; Hank of Cord; 1 of No. 48; 8 of No. 48a; 1 of No. 51; 1 of No. 52; 1 of No. 57c; 1 of No. 115; 2 of No. 126a; 4 of No. 142c; 3 of No. 188; 1 of No. 189; 3 of No. 190; 1 of No. 192; 1 of No. 213; 1 of No. 215.

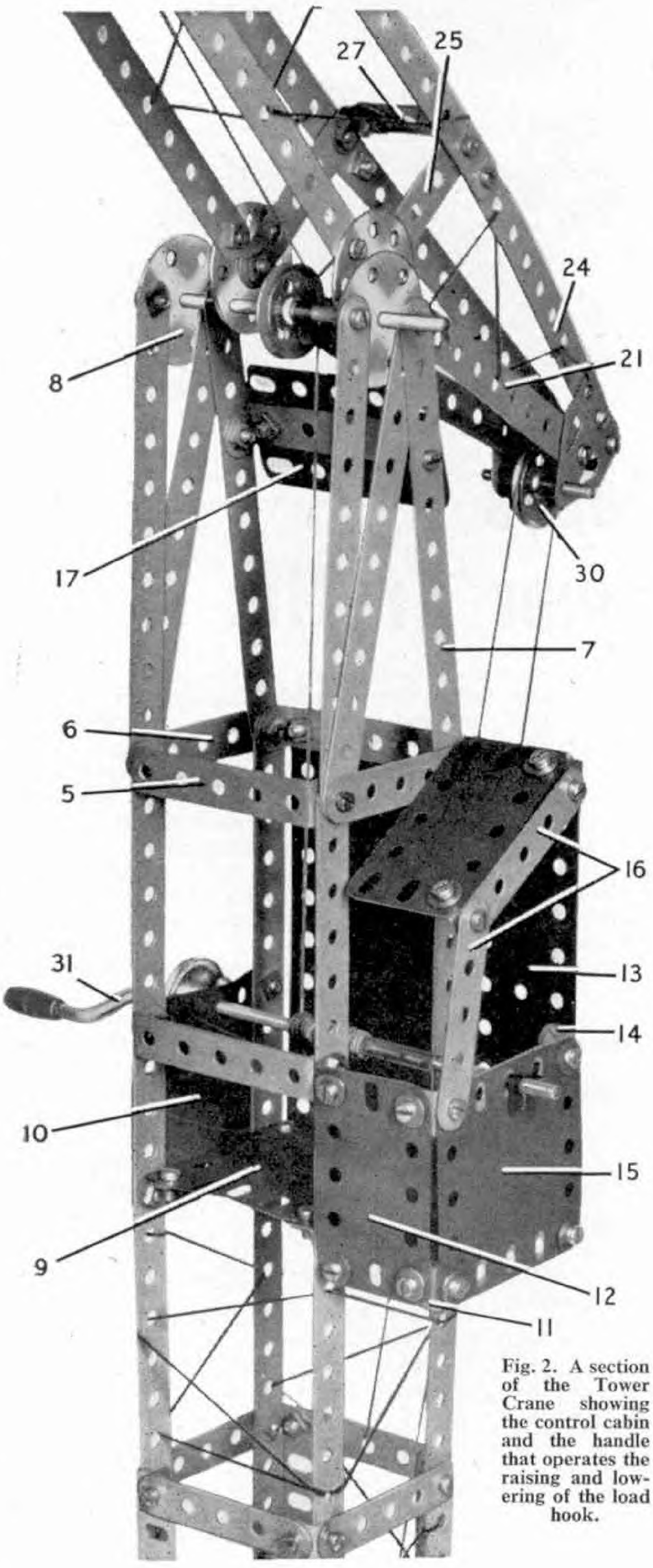


Fig. 2. A section of the Tower Crane showing the control cabin and the handle that operates the raising and lowering of the load hook.

Real Tennis—The Sport Of Kings

BY H. I. O'HARA

WORKMEN repairing the Treasury buildings in Whitehall, London, have recently unearthed the remains of a real tennis court built by King Henry VIII.

The ancient game of real tennis, from which modern lawn tennis is derived, originated in the seminaries and monasteries of France. It was played with bare hands, and the ball was stuffed with linen or human hair. The net stretched across a court built like a medieval cloister with pillars on three sides, topped by a sloping penthouse roof. Hands were eventually protected by a leather glove and this, in time, gave way to a racket made of ash.

Although the game was subsequently banned to the clergy, its popularity with the French king and his Court gave it the name of "real" or "royal" tennis, but at least two French monarchs died as a result of their love of it.

In 1316 Louis X played such a furious game of tennis in the Forest of Vincennes that, while resting in the shade, he caught a chill from which he subsequently died. Charles VIII was also unlucky when he went to watch a game of tennis at his chateau, at Amboise, in 1498. He struck his head against the doorway, fell backwards and died without regaining consciousness.

Yet another French king, Francois I, built himself a tennis court on board ship. Unfortunately, when the ship was launched she grounded and sank at her moorings.

* * * *

One of the earliest authors on tennis, Father Antonio Scaino da Salo, an Italian priest, put forward some ingenious theories on the origins of scoring when he wrote on this topic as long ago as 1555.

In the Middle Ages, the number 60 was of similar importance to our present-day 100, so that the game was taken to represent 60 points, divided into four equal stages.

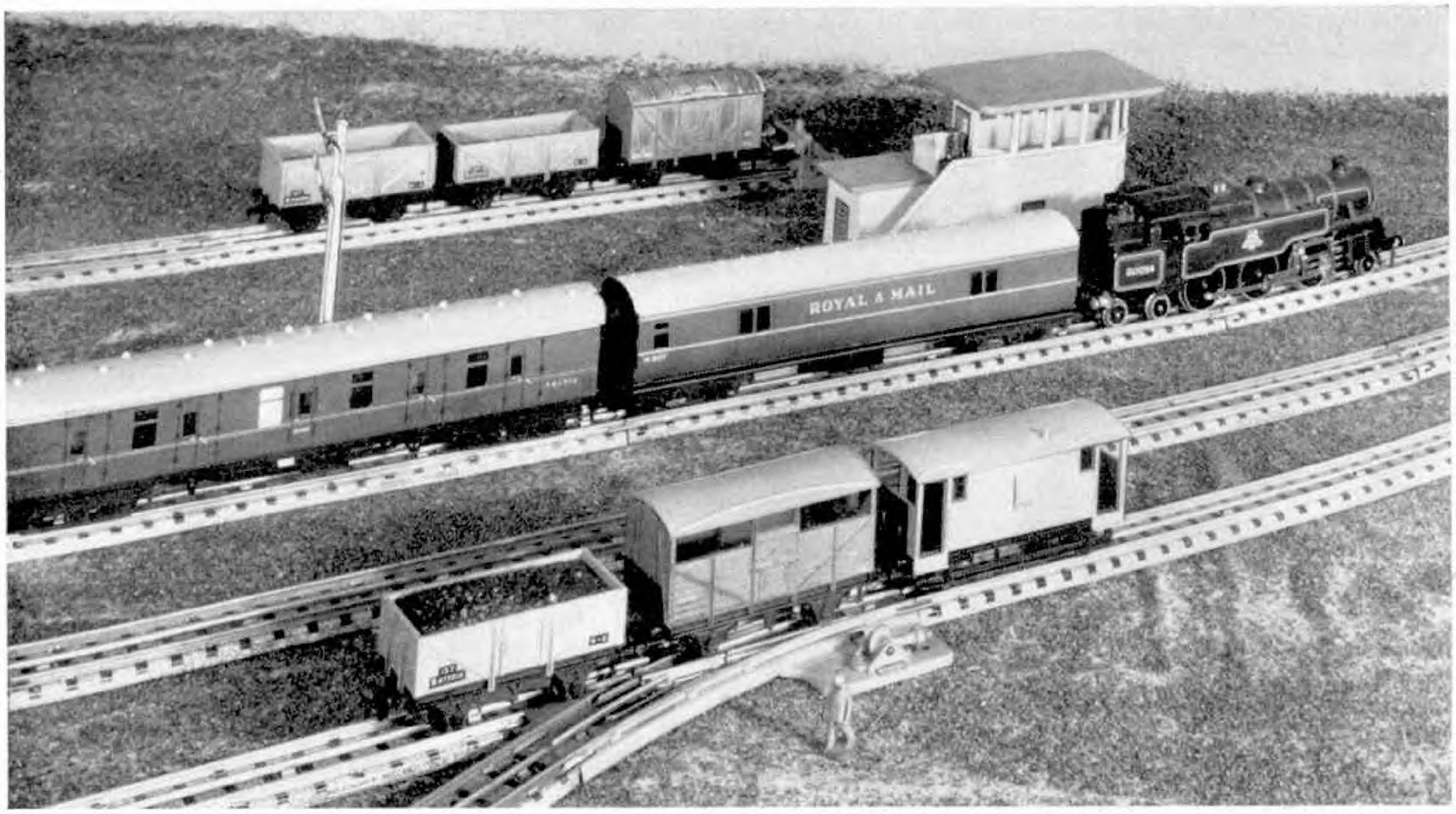
The score of "deuce" he explains as a corruption of the French "*a deux*", meaning that two points had to be won consecutively to win the game.

The term "love" or "nothing" is considered to be a corruption also of the French word "*l'oeuf*" or egg, since the figure nought was familiarly called an egg in France. In the same way, in this country a batsman who scores no runs at cricket is "out for a duck" or, literally, a duck's egg.

The word "Service" comes from the royal custom of engaging a servant to play the first stroke in each game.

Various theories have been put forward as to the origin of the name "tennis", one of which is that it springs from the French habit of calling out "Tenez", or "Play", as we do today at the start of a game. Another theory advanced is that the game is called after Tinnis, a town in the Nile Delta which, centuries ago, produced the fine linen which was used in the stuffing of tennis balls.

Today there are about a dozen real tennis courts in use in this country, the finest example of which is at Hampton Court Palace.



Kits—And Some Notes on Summer Traffic

READERS frequently write to ask me about the various Hornby-Dublo Kits for the assembly of certain buildings included in the attractive range of Accessories. Really the best way to find out about these, as many Hornby-Dublo railway owners have discovered, is to go and buy one and build it up yourself for use on your layout! But as these Kits figure in the advertisement pages in this issue I think one or two notes about them may be useful.

Broadly speaking, the Kits consist of various moulded sections, roofs, walls, windows, doors and so on that can be fitted together in an ingenious manner to form the respective structures. Most of you will be familiar with the buildings assembled from these Kits, for they frequently form part of the Hornby-Dublo scenes reproduced in these articles. There is for example the Engine Shed Kit, which builds up into a fine two-road building for housing Locomotives. An interesting accessory outfit to this is the Engine Shed Extension Kit which provides the means of converting the two-road structure into a four-road one, thus doubling the accommodation.

Stations are essential on any layout and the use of the Suburban Station Kit, either alone or together with the associated Island Platform Kit, allows the miniature railway owner to build up a realistic and attractive station. And the Island Platform Kit can be used on its own, if this is desired. Platform Extensions also are produced separately, making it possible to lengthen either the Island Platform or, with the addition of a separate fence, to extend the platform of the Suburban Station.

Hornby Railway Company

By the Secretary

Then there is the Goods Depot Kit, which builds up to form a businesslike loading shed or warehouse placed on a "bank", as railwaymen often call it, or platform. The Kit includes the crane that is necessary at such places.

Each of the Kits includes very complete instructions for assembly, with "exploded" views showing how the different components should be fitted together. It is important to follow these instructions, and the order of building up that is indicated, otherwise you may run into difficulties. Except for such items as the crane in the Goods Depot Kit, and the glazing material for the windows of the different buildings, the various parts and sections are moulded in polystyrene. For parts of the assembly nuts and bolts are used, while certain sections incorporate metal inserts or bushes threaded to receive the appropriate screws provided.

A point to note here is that before assembling for the first time it is a good idea to enter the screws into these inserts alone. This opens out the inserts, eases any tightness that may be present and makes assembly of the parts easier.

Finally, there is a Kit of a different kind, and this is the simplest of them all—the Lighting Kit that enables you to illuminate any buildings in the range of Kits. It consists of a spring clip fitting that forms a holder for the readily detachable 14-volt bulb provided. The necessary connecting wire is attached. The complete fixture is made to clip on to suitable projections on the interior surface of the roofs of the different buildings. Where the wiring is carried along the roof internally

The picture above shows a section of a "Postal Special" on the way to join the main train, and here in charge of a 2-6-4 Tank on a Hornby-Dublo layout.

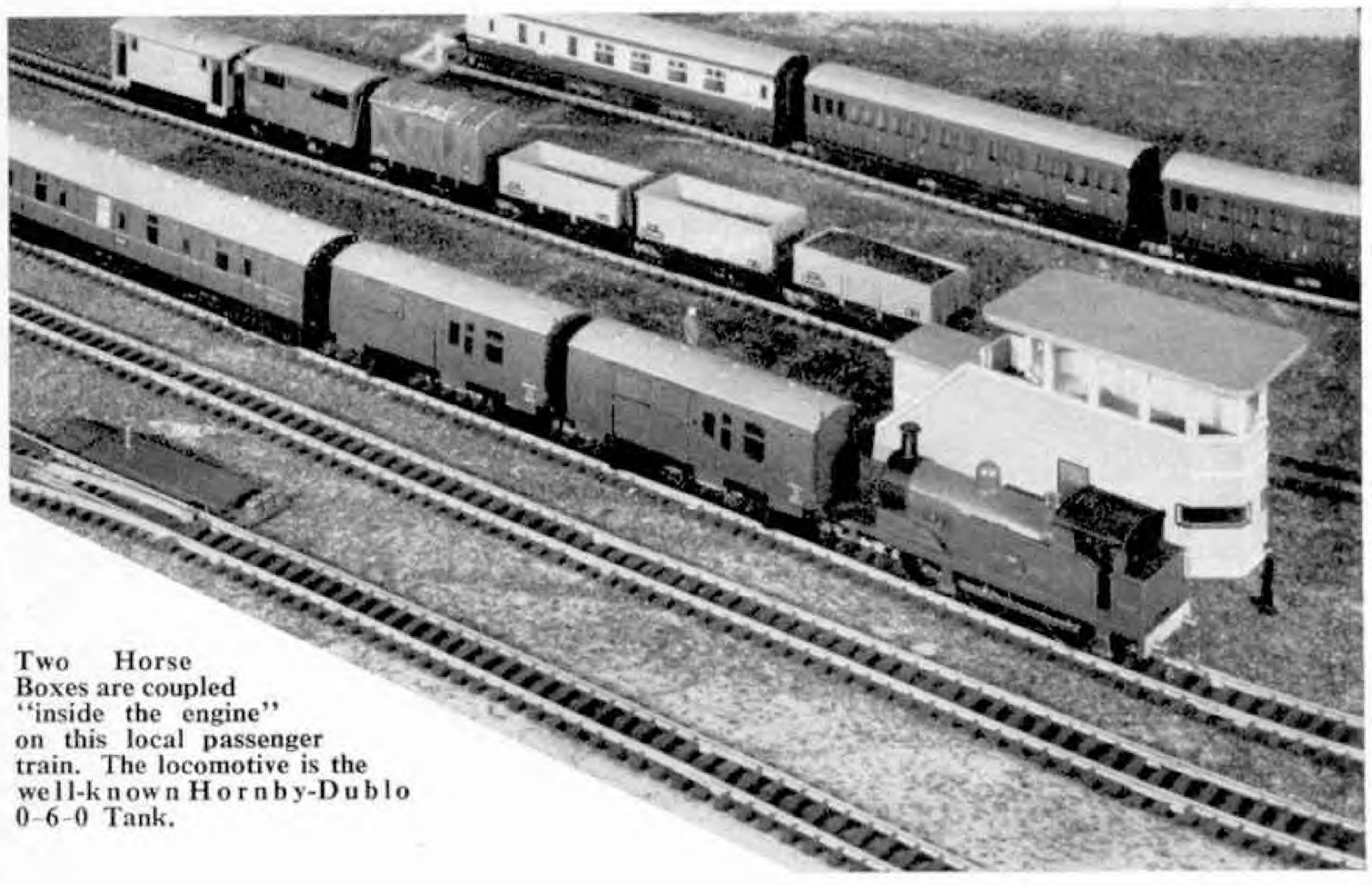
it can be secured by means of cellulose tape.

For use with such a lighting installation is the Terminal Panel available as a separate item. This is mounted inside the building by means of a self-tapping screw included in the building Kit. The panel includes four terminals, two on one side designated A, into which the wires from the Lighting Kit are fitted, the other two, designated B, for connecting the supply from a suitable power source. All that remains now is for you to try out these things for yourselves. I am sure you will be pleased with the results.

Useful ideas

Now, for a change, let us talk about the pictures on this and the previous page, which include one or two useful ideas. You will notice that in our first illustration one of the useful and popular Passenger Brake Vans is coupled to the well-known T.P.O. Mail Van. This is a combination I have previously suggested in these pages and many of you may well have put the scheme into practice already. The formation shown is simply a two-coach affair, the idea being that this is a separate section of a main line T.P.O. service, the vehicles concerned being on their way to join the rest of the train at an intermediate junction. A corresponding service in the opposite direction can form part of the running programme, the separate section being detached from the main train at the junction. In the ordinary way one would not expect a tank engine to be in charge of a T.P.O. train, but in this case, as the journey is supposed to be a fairly short one, the 2–6–4 Tank is quite suitable for the job.

For the main line section of the run the complete train, consisting probably of at least a further T.P.O. and another Brake Van or other Vans will be taken by an L.M.R. or E.R. express passenger 4–6–2, or W.R. Castle 4–6–0 Locomotive, according to the route your train is following. On a small layout with a restricted amount of rolling stock the operator will probably be quite happy to reproduce just the shorter section of the journey, with similar equipment to that shown in our picture.



Two Horse Boxes are coupled "inside the engine" on this local passenger train. The locomotive is the well-known Hornby-Dublo 0–6–0 Tank.

Friendly-looking engine

The next train to claim our attention, this time on a Hornby-Dublo Two-Rail layout, is also in charge of a tank locomotive. This is the useful and now familiar 0–6–0 Tank, a friendly-looking little engine suitable for all kinds of short-distance work. The train shown in our photograph is a local one, composed of S.R. compartment stock, and it is being made use of to convey the two Horse Boxes coupled next to the engine. Horse boxes can be attached to almost any kind of passenger train, and one sometimes sees complete trains of them, particularly before, and after, race meetings, horse sales and similar affairs, or simply in connection with the movement of stock about the country.

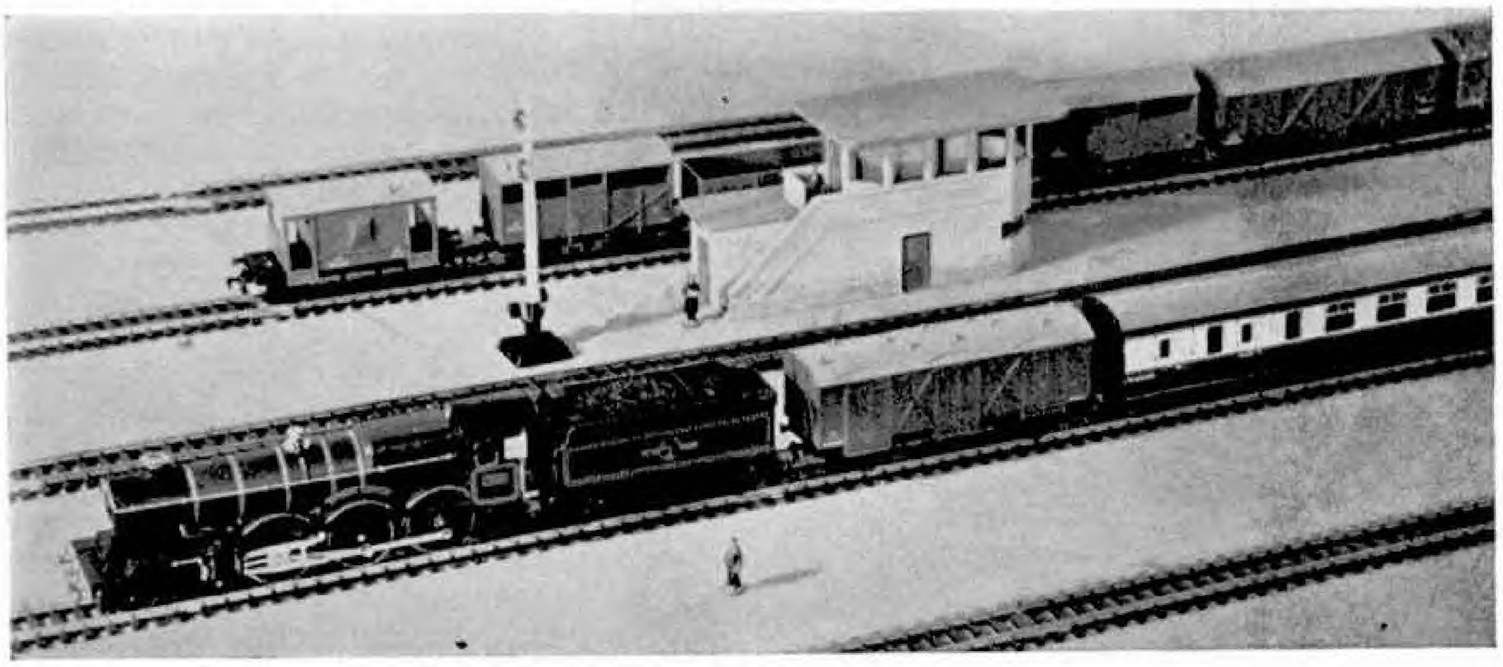
With its opening doors to the horse compartment the Hornby-Dublo Horse Box is a fine thing to have, and you can readily fix up loading or unloading scenes of various kinds with it, particularly as a miniature horse is already on board when you buy your Horse Box. Although in real life some horses can be skittish, and even troublesome, when being loaded or unloaded, the Hornby-Dublo horse is completely docile, and I do not think it is likely to cause any trouble for your Hornby-Dublo railwaymen.

The Hornby-Dublo Horse Box is an attractive product, with a well-detailed moulded body, and many miniature railway owners appreciate especially the fact that it is available in standard B.R. livery, and in the S.R. green that characterises the real horse boxes provided for service within recent times in that Region.

The season of summer train services is now approaching and I expect some of you, at least, are making preparations for running more trains on your layout and for improving your working programme generally. I know this will not apply to those systems which are operated at peak pressure practically all the year round, but various improvements can always be considered and the summer train season provides just the opportunity of working these in. Precisely what can be done will depend a great deal on individual layouts, the ideas of their owners and on the rolling stock and locomotives available. It is certain that it will be possible to make good use of such recent introductions as the Sleeping Car and the Passenger Brake Van on your busy long-distance services. We may be able to go more fully into this sort of thing in a later talk.

An item that is proving very popular with all Hornby-Dublo train owners is the Passenger Fruit Van, a long-wheelbase vehicle of distinctive character that made its appearance in the system last autumn. As its title implies it is suitable for running in passenger trains when necessary and this is exactly what is happening in the illustration here. The Fruit Van is carrying urgent cargo and advantage has been taken of the rapid transit provided by the express by attaching the Van to it, so adding to the interest of operation.

Fast travel for urgent perishable traffic is ensured by the presence of the Hornby-Dublo Passenger Fruit Van next to the tender of "Cardiff Castle" at the head of a miniature W.R. express train.



LAYOUT MAN WRITES ABOUT

A TRIO OF THREE-RAIL SCHEMES

IT is clear from the illustration below that Ronald Baker, H.R.C. No. 257740, of Stony Stratford, has a really good time with his Hornby-Dublo railway and the Dinky Toys and other items incorporated in the layout. Ronald is not the only keen railwayman in the family, for his father, Mr. S. G. Baker, has taken a considerable interest in the development of the railway and, I am sure, an active part in its construction as well.

Since practically all miniature railways are subject to constant alteration and development the details that follow do not necessarily relate to Ronald's railway in its latest state, but I know they will be of interest to other Hornby-Dublo owners, and to readers in general.

The Baker railway is fortunate in its situation for it has a room of its own and the system is laid out on a baseboard 8 feet 6 inches long by 4 feet wide. This is supported on legs that can be folded underneath if the railway has to be put out of the way at any time.

The layout is essentially a double-track affair so that independent control of two trains, one on each track, is readily afforded. In addition to the main tracks there is an outer running loop providing an alternative route, and this makes it possible to vary the running programme in an interesting manner. There is one station on the layout, one platform of which is for through traffic, while the other handles trains that are starting or finishing their journeys at this point. One track, which is actually the inner main line, passes through the centre of the station between the two platform lines.

* * * *

There is siding accommodation for rolling stock in the space within the main oval, and there is a Hornby-Dublo Turntable that is approached by means of a Girder Bridge laid directly on the baseboard. The Turntable provides access to three roads of a home-built locomotive shed.

Sufficient Points are incorporated to provide interesting running possibilities and those within easy reach of the operator are worked by hand. Two Points, one at each end of the layout, giving access to the outer loop, are electrically controlled. Isolating and Uncoupling Rails also are included in the layout and, since the photograph shown was taken, some Colour Light Signals have been installed. One of these is a Colour Light Distant and arranged in conjunction with it is an isolating section so that when the yellow, or caution, aspect is displayed by the Signal the train will stop in the isolated section ahead, just before the corresponding Home Signal is reached. Should the latter Signal by then show a clear aspect the train carries on in the ordinary way.

A special feature is made of T.P.O. operation, and the lineside apparatus for this is situated along a nice straight section of the inner main track. This good siting provides for certainty and smoothness in operation. Power for T.P.O. working is obtained from a dry battery supply. The current demand for the T.P.O. is only momentary, so that such a battery supply will last for quite a long time. The usual mail train consists of a T.P.O. Mail Van, together with a standard Brake/Second, a short but effective make-up for a combined mail and passenger train.

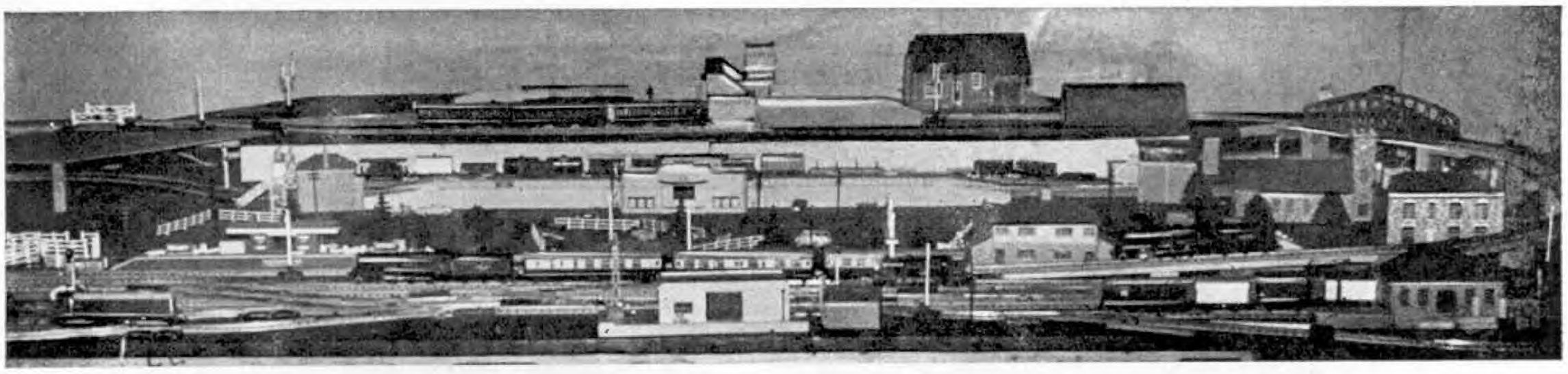
A good deal of care has been given to the arrangement of lineside and other buildings and there is a complete lack of the crowded effect that is seen on some railways. A road system makes its way through the district served by the railway and at one end of the layout there is a miniature township on a raised section under which the railway is carried in tunnels. The junction of the outer loop and the main running track is actually situated in this tunnel section, and the route to be taken by a train entering one end of the tunnel is not immediately apparent to the onlooker. This can be quite an entertaining feature when one is showing off one's layout to a visitor. At the opposite end—that in the foreground of our picture—there is a road bridge with sloping approaches, one at right angles to the bridge itself, which is an unusual, but effective, feature.

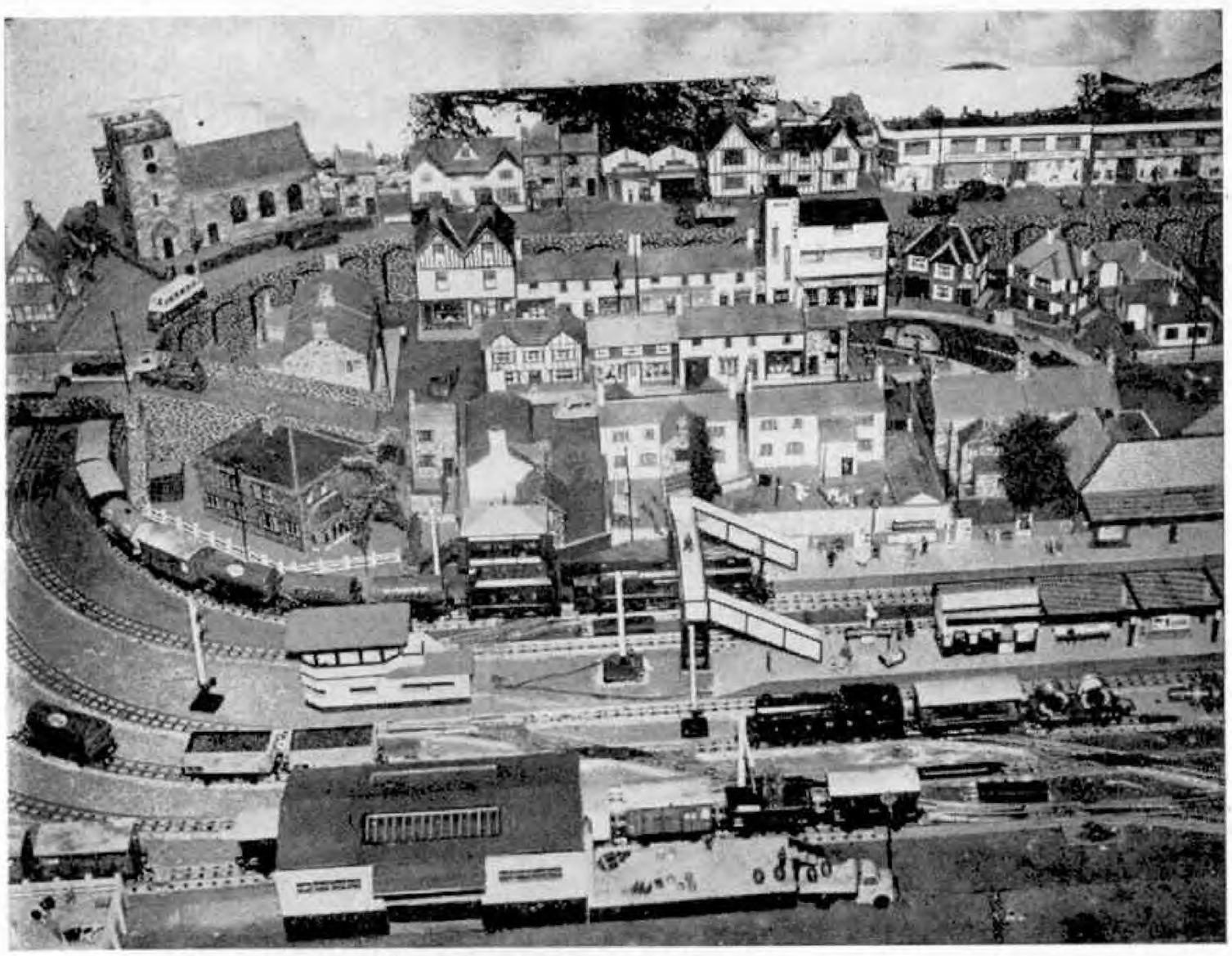


H.R.C. member Ronald Baker, of Stony Stratford, is busy with the Hornby-Dublo layout described in these notes. The arrangement of the effective road bridge in the foreground is of particular interest.

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The next layout I have to tell you about is that shown in the upper illustration on the opposite page. The picture presents a general view of the system of Dr. James Scott, of Alyth,





Top picture shows a broadside view of the Hornby Dublo system developed by Dr. James Scott, of Alyth, on which control arrangements are a special feature. In the lower illustration is one end of the extensive Hornby-Dublo layout built up by D. A. Findlater, of Nairn. Note the lineside effects.

Perthshire. Like the layout just described, this incorporates a raised section, but in this case the high-level "ground" carries part of the railway. It is approached by gradient sections that branch off the main line track at normal level towards each end of the layout. The railway is laid on a special table measuring thirteen feet by five, and the generous width provided has made it possible to incorporate sidings outside the main track and in the foreground of the railway, as it were, when viewed by the operator. Because of the limitations of space on the average railway this feature is not often possible. Where sidings can be used in this manner they can be developed right up to the ends of the baseboard, and this is obviously of considerable advantage.

The whole layout is divided into more than twenty electrical sections, and control is arranged through four power control units. Each unit covers a complete main section and arrangements are such that it is possible to have as many as four locomotives running at one time. Quite clearly this is a layout that demands a fair degree of skill to operate successfully but, no doubt, practice makes perfect.

As might be expected, the Signals are all electrically-operated and this applies to the Points as well. The controls generally and the switches for the different sections, as well as those working Points and Signals, are grouped appropriately on a panel facing the operator. There are eight locomotives and numerous carriages and wagons so that a splendid variety of trains can be assembled. The system has been in course of development for more than twelve years and even now is not considered by its owner to have reached anything like a final state.

* * * *

Our third layout, part of which is shown immediately under the one just described, is an extensive affair, as you can see. This has been built up by Mr. D. Findlater, of Nairn, for the benefit of his son, and the work involved has, needless to say, provided a great deal of enjoyment. The railway has been referred to before in these pages and the section of the system now shown forms the opposite end from that illustrated in our issue of May 1959. Here again we have an example of a layout on which the sidings have been developed outside the main tracks, and at each end there is, in fact, a goods yard extending toward the edge of the layout board, one of them being shown in the picture on this page. This manner of providing railway features outside the main track has not been allowed to rest here, however, there being a turntable and engine shed layout and various buildings of industrial character stretching across one end of the board.

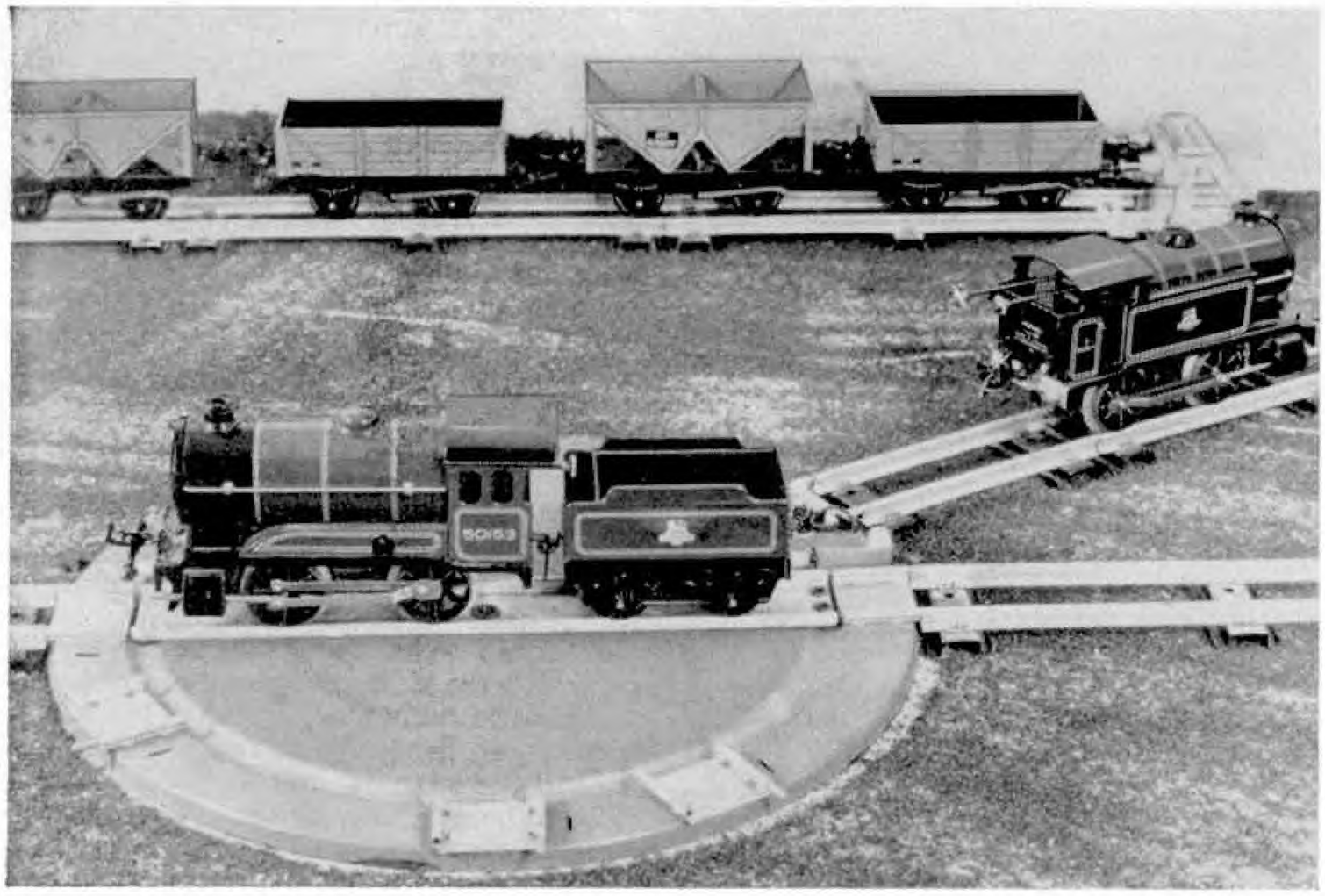
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A feature of special interest, from the point of view of layout and operation, is that the two goods yards referred to are not entered directly from the main line. There is a long reception road from which the goods yard tracks branch off, and into this trains requiring to shunt can make their way. The shunting work can then be performed without any interference, with traffic passing on the main line.

Apart from the railway features there is much of lineside interest, the various buildings and roads having a splendid panoramic effect as the railway is carried partly under cover of a raised section at the back of the layout. On this there is not only a church, and house property of different kinds, but also a handsome arcade that forms an attractive shopping centre. Dinky Toys traffic is evident on the roads, but there is not too much of it, the now-familiar urban traffic congestion being fortunately unknown in this particular part of the world in miniature.

BOOK REVIEW

In **Tackle Model Railways This Way** (Stanley Paul, 12/6d.) Ernest F. Carter covers various aspects of the hobby. In view of the wide range of commercially produced components available nowadays, the "Do It Yourself" operations which he describes are confined to whatever constructional, and similar, work the miniature railway owner may find necessary in preparing the site for his railway and in fitting up the baseboard. In addition there are hints on layout design, track laying, scenery building and so on. Railway operating and signalling principles are considered and the book contains various tables of useful dimensions.



The Hornby Tender Locomotive shown here fits comfortably on the moving section of the No. 2 Turntable. This accessory can be connected to several off-going tracks, as shown in the picture.

TURNTABLE TALK

A SIGHT that is always fascinating is that of a big railway engine being turned on a turntable. Turntables have been familiar since the earliest days of railways, when they were often referred to as "turnplates". Nowadays there are many power-operated turntables, but it is still possible to see the table being turned by hand by the driver and fireman. It looks such an impossible job to move a heavy engine round, and yet turntable design and construction allow the task to be accomplished by the two men.

There is almost always a turntable at a main engine shed, or motive power depot as they are called nowadays, but turntables are often found as well at, or near, some terminal stations or important junctions. Sometimes the railway planners seem to have been thoughtful enough to place this useful piece of equipment right where we can see it, either from the platform or from a suitable spot *on the right side of the fence*, but here and there turntables are hidden, or at least partly obscured from our view, by some building or other necessary feature. This can be rather annoying, but after all a turntable has to be put where it will be most useful.

Needless to say, the Hornby Gauge 0 railway system includes a Turntable and you can see this in use in the picture on this page. The No. 2 Turntable, as it is called, is a useful and attractive accessory and owing to its nature is bound to be prominent in any layout in which it is included.

The Hornby Turntable consists of a circular base, around the edges of which is placed a series of short lengths of rail that can be joined to a number of outlet tracks. The movable centre section, or turntable proper, is pivoted in the centre of the base and, when turned, will line up correctly with any of these outlet tracks.

BY

TOMMY DODD

The length of the centre section of the Turntable is such that, as you can see in our illustration, a Hornby No. 50 or 51 Locomotive and Tender will easily fit on to it. Naturally, the Hornby Turntable is worked by hand and turning the engine on the table is quite a fascinating operation, even in miniature. As in actual practice, so that there can be no danger of derailment through the table not being lined up correctly with an outlet track, a locking device holds the table firmly in position against the road selected, and this has to be released before the actual table can be moved.

* * * *

There should, therefore, be no mishaps at the Turntable as long as the operator remembers to make use of the locking lever, and provided that the Turntable remains firmly joined to adjacent lengths of track. There is usually no difficulty in this direction in cases where the Turntable is connected to several radiating tracks. Certainly there will be no trouble where the layout as a whole is screwed to a baseboard, but on a system that is simply put down as and when required it is wise to provide some way of keeping the Turntable in place, especially where it is situated at, or near to, the end of a single track.

* * * *

Since one cannot make use of the standard Rail Connecting Plates with a Turntable, I feel I should mention a scheme devised by a Hornby Gauge 0 enthusiast and referred to in the *M.M.* some three years ago. This makes use of the PCC Point Connecting Clip, a simple fitting which you all know well. The open ends of the PCC are first placed securely under the two running rails of the piece of track next to the Turntable, over the turned-up portion of the first sleeper. Then the curved end of the PCC is made to bear against the inner ends of the rails of the outlet track concerned. In this position it does not prevent the movable section of the Turntable from being revolved, and the link-up is now complete.

* * * *

The No. 2 Turntable is so called because it was originally designed specially for layouts incorporating 2 ft. radius Curves and Points, and as long as you have the necessary space it is usually not difficult to include it in a railway scheme. Apart from its use just for turning locomotives, and providing the means of leading them on to one or other of the outlet tracks, which may form part of a locomotive yard or depot, the Turntable can sometimes be used to lead to one end of a run-round loop line in a terminal station scheme. A standard Curved Rail is joined to the Turntable outlet track next to the platform line. At the other end of the loop is a standard 2 ft. radius Point, and the curved branch of this is connected to a 2 ft. radius Curved Rail to form a reverse curve and so keep the straight section of the loop parallel with the platform track. The straight track in the platform line between the Turntable and the Point is longer by two Straight Rails and a Straight Half Rail than the straight section of the loop lying between the two Curved Rails.

With this scheme in use, an arriving engine is uncoupled from its train and passes on to the Turntable. The table is moved and the engine can be turned right round if necessary before making its way along the loop to the opposite end of the train. This arrangement is unusual, but you will find that the scheme adds considerably to the fun of operation.

WITH THE SECRETARY

Club and Branch News

NEWS FROM INDIA

REPORTS of the activities of the Mysore Meccano Club, in India, published regularly on this page, have given our readers an indication of the keen enthusiasm and success of this distant "outpost" of the Meccano Guild. It was started by Mr. M. N. Radhakrishna, just over eight years ago, when he was a boy of 15, and he has been Secretary from then until a few weeks ago. Now launching out into the world of science and industry, Mr. Radhakrishna, who is a B.Sc., has accepted an appointment with a firm in Bombay, and this has meant the end of his long and close association with the Mysore M.C. His regrets at leaving Mysore will have been tempered by the personal satisfaction he must feel in the high standing and prestige which the Club has attained since he began it in 1952.

Mr. Radhakrishna goes to Bombay with the good wishes of all associated with the Club, and with those of myself and the staff at Binns Road Headquarters. We shall follow his career with interest.

CLUB NOTES

NORTH END (PORTSMOUTH) M.C.—The Club room is open on Monday, Tuesday and Wednesday evenings from 7 to 9.30; Saturdays, 11 a.m. to 2 p.m. and Sunday afternoons, 2 to 5.30 p.m. The Club subscription is 1/– for adults, and 6d. for juniors. An "Interest Board" has been set up in the Club room, on which newspaper cuttings of engineering interest and photographs taken by members are displayed. Mr. Enfield has bought a chess set and a Newsletter is now being printed on the Club machine. It contains reports on recent Club and Branch activities and advance notices of exhibitions. *Secretary:* Mr. A. J. Nicholson, 213 Sultan Road, Buckland, Portsmouth.

NEW ZEALAND

ST. JOHN'S (ROSLYN) M.C.—At the recent annual meeting the President, Secretary and Librarian were re-elected, and new officials appointed to other important positions. It has been decided that meetings shall continue in their present form—minutes, roll-call, apologies for absence, correspondence, examining and marking of Meccano models, after which a game is played and the evening ends with a talk, or some recreative item such as reading *Meccano Magazines*. As last year, the members are formed into two groups, known respectively as *Sprockets* and *Washers*, and friendly rivalry in model-building and other Club activities is encouraged. R. Nesbitt, ex-Vice-President, has left the district to live in the North Island of New Zealand. The Club staged a models display as a feature of a large fair recently organised by Roslyn Presbyterian Church.

The Christchurch M.C. have suggested regular correspondence between themselves and St. John's, and the arranging of an inter-Club model-building competition, and these have been agreed to. *Secretary:* W. J. Earl, 60 Ann Street, Roslyn, Dunedin, New Zealand.

NORTHERN NIGERIA

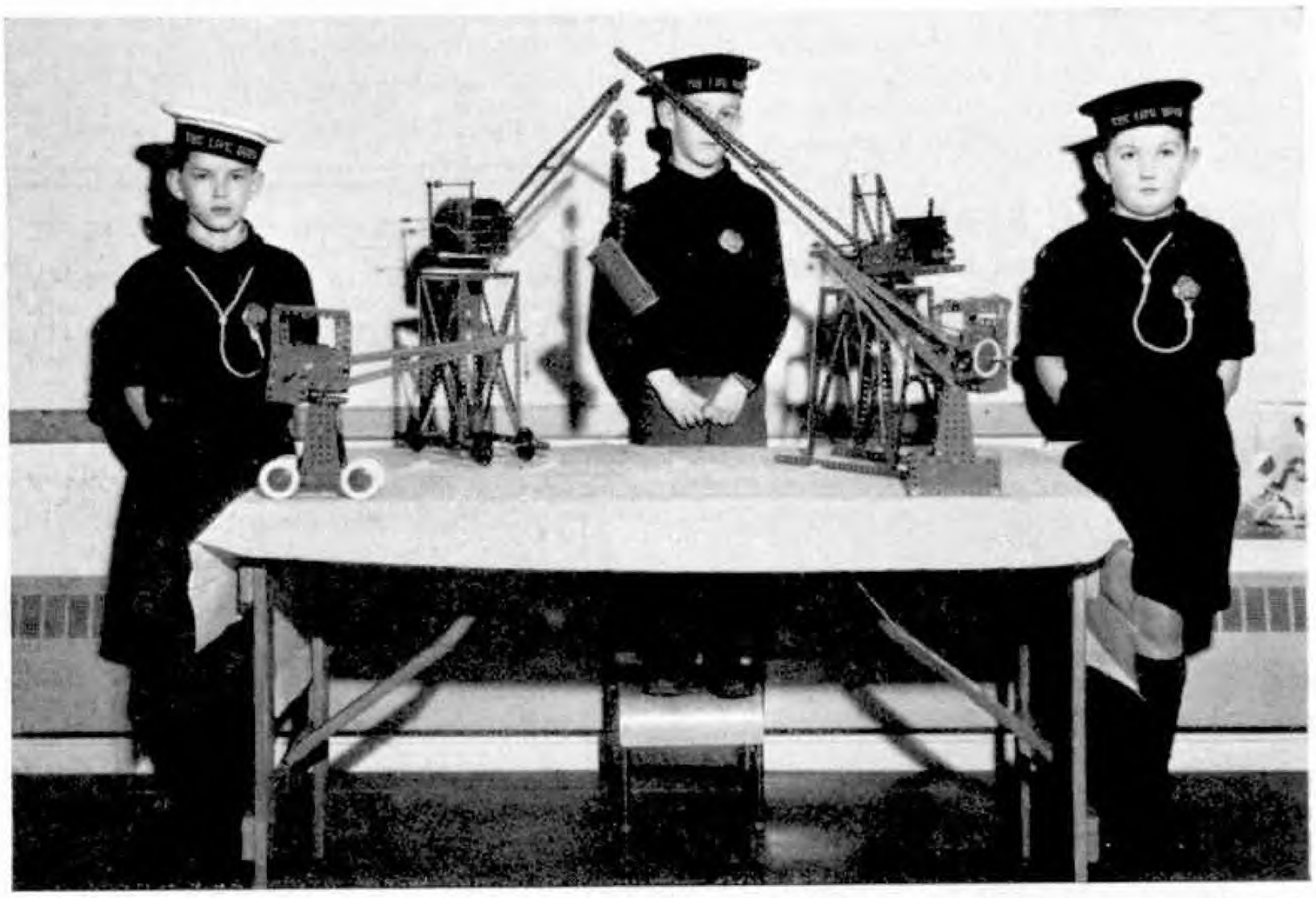
GINDIRI SECONDARY SCHOOL M.C.—The Club began the present session on February 24 with 14 members, 13 of whom are new and in average age are younger than previous members. The acquisition of another Meccano Outfit has helped considerably in providing equipment for this increased membership. The opening meeting of the Session was devoted to getting the room ready, and the Leader then gave a talk on various Meccano Parts and demonstrated ways of driving shafts through gears. Actual model-building began with assembling small models from the Nos. 0 and 1 Outfit Manuals, under the guidance of the Secretary, and the new members are making good progress. *Leader:* Mr. P. F. Bradford, Sudan United Missions, Gindiri, P.O. Barakin Ladi, via Jos, N. Region, Nigeria.

SOUTH AFRICA

CAPE PENINSULA M.C.—The Club continues to make very good progress, with interest and enthusiasm in Meccano model-building well maintained. The Club, in association with the local Meccano agents, recently staged an excellent exhibition at Stuttafords, a large departmental store in Cape Town. The 14 models they provided were arranged, with those of the agents, on shelves fitted to a panel dividing two departments, a position which gave them maximum publicity and caught the eye of every store visitor passing between the two departments. The models made a fine show. *Secretary:* Mr. C. Cohen, 23 Upper Rhine Road, Sea Point, Cape Town, South Africa.

BRANCH NEWS

GINDIRI BOYS' SECONDARY SCHOOL—With the same new members as the associated Meccano Club, it has been necessary to start at the beginning in model railway working, using a simplified layout. *Chairman:* Mr. P. F. Bradford, Sudan United Missions, Gindiri, P.O. Barakin Ladi, via Jos, N. Region, Nigeria.



Three enthusiastic members of the 30th (Bristol) Life Boys Team M.C. with excellent Meccano models which they have built.

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FOR OTHER STAMP ADVERTISEMENTS SEE ALSO PAGE 224

For Stamp Enthusiasts

Stamps About Stamps

By F. E. Metcalfe

THERE was a time when most collectors treasured any stamps which came their way, even cut-outs from letter cards, etc. This was in the relatively early days, before very many stamps had been issued, and of course it was possible then to feel that you were getting somewhere and that your collection was taking shape. Alas, with new stamps coming out at the rate of around 30,000 a year and the pace accelerating all the time, general collections —for those who take the hobby seriously —are out. All that a would-be philatelist who wishes to be making real progress can do is to take up a group, and this is



why thematic collecting now has so many adherents. All kinds of subjects are made a theme, as I know from correspondence received from *M.M.* readers.

I am afraid that neither the British newspapers nor the radio broadcasters give as much space or time to our hobby as is generally the case abroad, which may be the reason why our Post Office also rather neglects us. It was quite a surprise, therefore, to hear mention of a new set of stamps by Mauritius, in a fairly recent B.B.C. news bulletin. It also gave me the idea to write about a group of stamps which grow in popularity as they increase in number. I refer to stamps which have other stamps as the subject of their emission.

The United States issues a lot of stamps, mostly attractive and generally devoted to interesting and worthwhile subjects, and it is true that the object behind their emission has little to do with collectors. But it is also a fact that the latter do at least foot the bill for their extra cost, so there is some justice about the suggestion of one American collector that a stamp in honour of stamp collectors is overdue! Knowing the U.S.A., I think we may get such a stamp one of these days. In the meantime, we will have to be content with



stamps with postal themes, and such an issue was the one to which the B.B.C. referred in that news bulletin.

This Mauritius set, released on January 11, consists of four values (10c, 20c, 35c, and 1r.) and commemorates the sesquicentenary of the island's Post Office under British administration. The stamps were printed by that fine Dutch firm Jon Enschede, and do them great credit, as they do the Crown Agents, who had the management of the issue. The portraits are of particular interest, as that of the Queen is after the portrait of Annigoni (the same portrait has been adopted for may British Commonwealth stamps, in particular the very handsome 5c. of Canada released in 1959 to commemorate the Royal visit), and that of George II comes from a portrait by Sir Thomas Lawrence, which the City of Coventry kindly allowed to be copied for the purpose. Incidentally, according to the Crown Agents, this is the first time a portrait of King George III has ever appeared on a stamp. Of course, earlier kings (such as Charles II) have been featured in the past.

World-wide popularity

A number of foreign stamps with philatelic subjects have come out from time to time; too many, in fact, for there to be room to do full justice to them here. So, even if we confine our collection to British and Commonwealth issues only, we will find plenty to do gathering them together. You will not have a gigantic lot, filling several albums; in fact, they will all go in one album. But you will have a



collection which, apart from its interest, will have fair investment possibilities if you keep them for a few years, for such collections have world-wide popularity and this is a big factor when taking value into consideration.

Of course, the first stamps you want are to be found in the issue made by our own Post Office, in 1940, to commemorate the world's first stamp, the ubiquitous "Penny Black". Now before I go any further, and to anticipate that evergreen question, you can collect mint or used, but if you are not going in for stamps in both states—which is to be recommended—then I suggest mint. Anyhow, after the "Penny Black" issue of Great Britain we come to Australia which has issued stamps to commemorate first issues for Tasmania, Western Australia, South Australia and Queensland, as well as a particularly interesting stamp to mark the 150th anniversary of the Australian Post Office—five most attractive stamps all of which, mint or used, can be picked up for a few coppers.

A "Centenary" set for Barbados is the next on our list, to be followed by a really interesting emission for Bermuda, in 1959. This little set, which still costs less than two shillings, was issued to commemorate the 100th anniversary of what are known as the Postmaster Perot's hand stamps. The design of the issue includes a facsimile of these "Perots", and one is illustrated here for the benefit of readers who do not know the stamps. Incidentally, a 6d. stamp was issued by Bermuda in 1959 to mark the completion of the restoration of the old Perot post office the previous year. I understand that the building now looks much like it did when the old postmaster was making his franks.



British Honduras fairly recently issued a set of three stamps (July 1, 1960) to commemorate the centenary of its Post Office, and this should be the next set for our collection. Now comes Canada with a fine set of four stamps, this time to mark the centenary of Canada's first stamp (an illustration of which appears on the 15c. value); and so I could go on, if space allowed. To repeat what I have already written—all these stamps on actual postal matters are quite cheap and easily come by.

Spate of new issues

I have tried to leave myself space to refer to quite a spate of stamps which have appeared recently, and which are really top notchers for such a collection as we have in mind. Malta, as recently as last December, issued three stamps to commemorate the island's first issue, a really handsome set. Later still St. Lucia came along with three stamps, for a similar commemoration, and these are a particularly noteworthy job of printing, as the whole stamp is line engraved. To get the portrait so exact, as compared with the original, does great honour to Waterlows, who, collectors who do not know already will be sorry to hear, have gone out of the stamp-printing business.

Well, that takes up my space, but I hope that as a result of what I have written some readers will form what could be most interesting stamp collections.

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M. & G.N. Badge



The attractive badge shown in the illustration above depicts the Coat of Arms of the late Midland and Great Northern Joint Railway which, in its heyday, was an important institution in East Anglia. The badge is enamelled in red and blue, with the lettering and motifs in silver, and well perpetuates the memory of a popular railway.

Badges are available only through the Midland and Great Northern Joint Railway Preservation Society, at 3/– each, post free. Remittances should be sent to Mr. D. Rees, 7 Sydney Road, Barkingside, Ilford, Essex, or Mr. B. Clark, 578 Eastern Avenue, Ilford.

COALBROOKDALE WORKS MUSEUM

Allied Ironfounders Ltd. announce that the Coalbrookdale Works Museum, near Wellington, Shropshire, established in 1959 to commemorate the 250th anniversary of the founding of the company, and which adjoins the present works, is again open to the public.

Combining in unique manner actual remains of the earliest days of the iron-founding industry with an extensive indoor display of exhibits depicting the long history of the Coalbrookdale Company, the Museum will remain open, free of charge, until October 31. The hours are: Mondays to Fridays, 10 a.m. to 12 noon and 2 p.m. to 4 p.m.; Saturdays, 2 p.m. to 4 p.m.

Parties from schools and technical colleges are specially welcome. The Museum is only one mile from the famous Iron Bridge across the Severn, the first cast-iron bridge in the world and itself a Coalbrookdale classic.

Organisations wishing to visit the Museum should write to: The Secretary, The Coalbrookdale Co. Ltd., Wellington, Shropshire. (Telephone: Wellington 510.)

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The ice cream company will employ 31 of these vehicles. The 24-ton vehicles, fitted with insulated bodies, are capable of carrying more than 2,000 cans of ice cream, representing a volume of approximately 4,000 gallons, and will be engaged on long-distance hauls from the firm's Acton, Manchester, Edinburgh and Gloucester depots.

The remaining nine vehicles, also fitted with insulated bodies, will be employed on bulk deliveries of meat products.

Stamp Gossip—(*Continued from next page*)

but in 1884 received its own Governor. From time to time there have been political rumblings. It may be remembered that it is not so long since the committee which came over for talks had to call it a day because it was claimed that the leader had been discussing politics with Guatemala. Anyhow, the stamp issue seems to seal the differences, so let us hope all is well at last. Incidentally, unlike other West Indian currencies, the Honduras dollar is 5/–, not 4/2, a point to remember when buying the stamps.

TIP OF THE MONTH



The "zoo" stamps of South Africa are very popular, and there are plenty about, for South Africa is a big country and uses a lot. These designs first appeared in 1954, and some of the values (½d., 1d., 3d., 4d., 6d., 1/–, 2/6 and 5/–) changed their watermark in 1959 and 1960 from the "Springbok Head" to the "Arms" design. The latter are much scarcer than the former. They are not rarities, but are well worth looking for, particularly if you get a full set together. To tell the difference, the design of the first watermark shows the outline of a springbok's head, and the second a rather dim coat of arms. They are not at all difficult to distinguish between, so look out for the "Arms" type.

FOR OTHER STAMP ADVERTISEMENTS SEE ALSO PAGE 222

Stamp Gossip

PACKING UP

JUNE! Let's get out to cricket, boating, swimming, etc. But what about the poor old stamp album, which provided so much entertainment when none of those outdoor sports could be indulged in? Has it been slung on the top shelf, to lie flat with a pair of football boots, and, like discarded sports gear, to remain there until it can again serve its purpose?

Well, if that's where your stamp album is lying as you read these lines, and you leave it there for a few months, don't be surprised, when you come to take it down again, if you find that some of your best mint stamps have stuck to the album pages and thus are more or less spoiled.

A stamp album containing mint stamps at least, should *never* be kept lying flat, for it is quite amazing what pressure stamps have to contend with unless the album is kept in an upright position. Any dealer will tell you how often he is called on to buy a stamp collection where faulty storing has resulted in mint stamps being "stuck down", to use the term, and unless the prospective seller will accept a give-away price the dealer politely refuses to buy. So, do remember that you spend good pocket money on some of your stamps, and that, just as last winter you got a lot of fun out of your collection, so next winter you will again want the same enjoyment. But you won't get it if your collection has not been sensibly stored.



SOUTH-WEST AFRICA

This is one of the countries which has had to change its stamps because, being attached to South Africa, the cent, and the rand have superseded pounds, shillings and pence. So a brand new set of postage stamps (not an adaptation of existing designs, as was the case with South Africa) was issued on the day of the currency change-over, February 14. It is an interesting set. Like South Africa, S.W.A. is content with a top value of 1 rand, or 10/–, which makes the pretensions of that South African protectorate Swaziland to a 2 rand stamp look rather silly.

The new set is an education in itself, with illustrations of fish, birds, monuments, precious stones, etc., but strangely enough no animals are depicted. The S.W.A. stamp illustrated on this page shows the General Post Office at Windhoek, the capital. A much more interesting building is on the 12½c. value, which depicts the old Fort Namutoni, built by the Germans in 1902 as a military frontier post. Two years later it was attacked by 500 Ovambo tribesmen and there were only seven German soldiers to repulse them. Ultimately the fort was destroyed, but a year later it was rebuilt and is now a rest camp for tourists. How nice to be one of them, in such an interesting country. I am afraid most of us will have to be content with the stamps.

MALAYAN FEDERATION

The stamps of the various States of Malaya are very popular now, and with every justification, for here we have eleven states all with their own sets of stamps. They could be exploiting collectors, but they are not doing anything of the kind. As a matter of fact, they are even thinking of dropping their values and replacing them by a single set, which the whole federation would use instead, thereby reducing the total face value from almost 100 dollars to about fourteen. The Crown Agents are still to handle the sales outside the federation, which means a first-class service for dealers (who naturally pass on such benefits to their customers). To sum up, all the Malayan philatelic garden is lovely. The popularity of Malayan stamps is, as I have indicated, well merited, and shortly I will try to deal more extensively with this interesting group of countries. Meanwhile, there are plenty of current Malayan used stamps to be picked up cheaply, and they are well worth collecting.



NEW CONSTITUTIONS

All the world is on the move, and the Crown Agents (who handle the new stamp issues for so many of the countries in the Commonwealth) seem to be kept busy preparing stamps to commemorate changes in political constitutions. One of these is British Honduras, that morsel of the American continent which seems to be so much coveted by Guatemala, of all countries.

British Honduras has had four of its then current stamps overprinted to mark the big event, and just in case everybody does not know exactly all there is to know about the country it can be explained that it became a British Colony in 1862. At first it was under the rule of the Governor of Jamaica, (*Cont. on previous page*)



By E. W. Argyle

Locomotives On Stamps



DENMARK'S first railway engine was the "Odin", a standard 2–2–2 "Sharpie" type built for the Copenhagen–Roskilde Railway, in 1846, by Sharp, Roberts & Company of Manchester, and was an improvement on Stephenson's "Patentee" on the Liverpool and Manchester Railway. Its large dome was conspicuous. These "Sharpie" domes were a masterpiece of casing and were reputedly made by one old workman, whose time they fully occupied. When he retired, the pattern was discarded in favour of a simple round-topped cover with bell-mouth.



The "Empire State Express" drawn by locomotive "No. 999", is featured on the 2 cents U.S.A. stamp shown above. It was with this locomotive that Driver Hogan of the New York Central and Hudson River Railroad attained the then record speed of 100 m.p.h., in 1893. The engine, a 4–4–0 type, was designed by William Buchanan, Superintendent of Motive Power of the N.Y.C. and H.R.R. and was built at the Company's shops at West Albany, N.Y., in 1893.

FROM OUR READERS

Rounding Up The Ballast Wagons

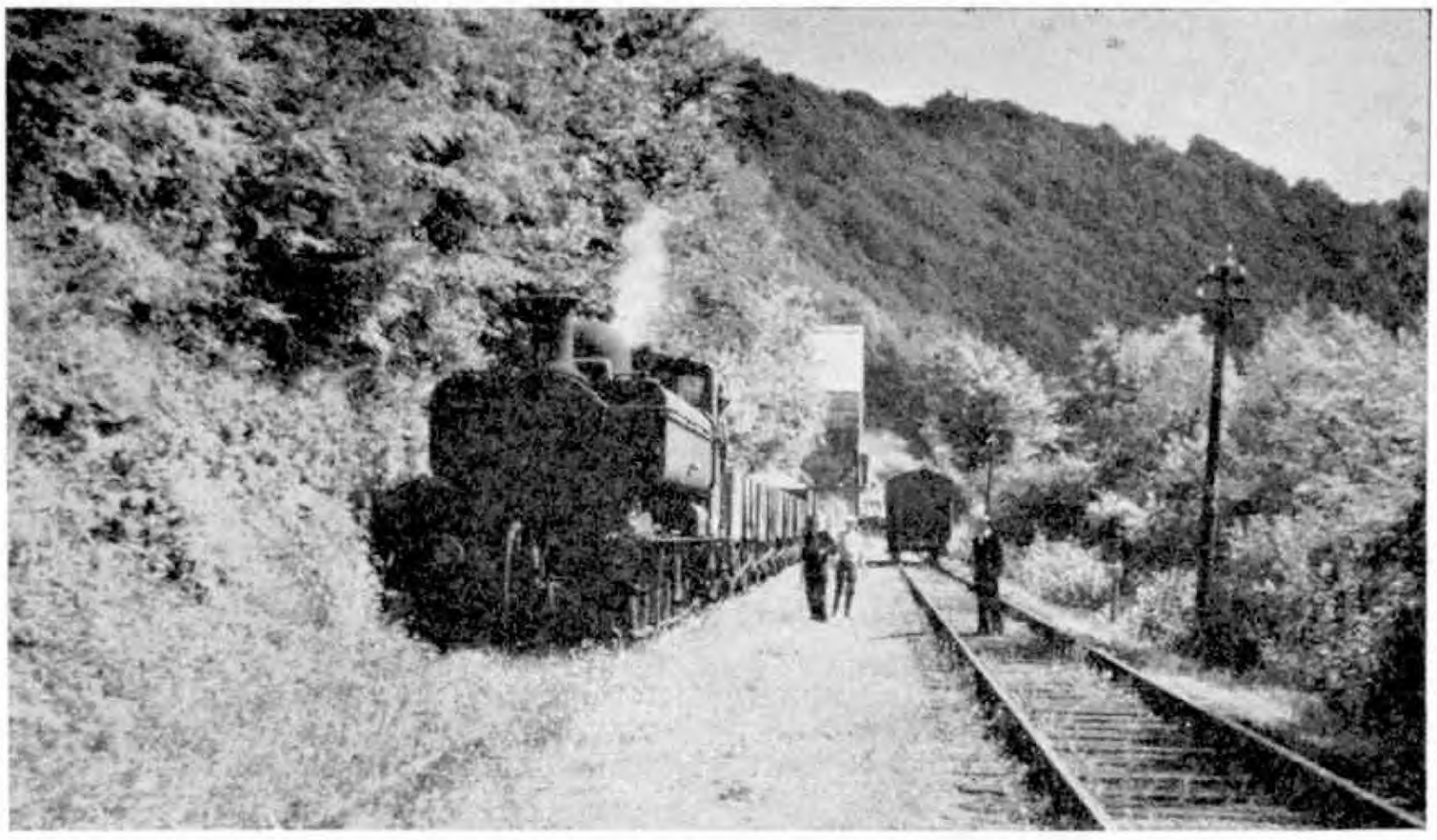
YOU may be interested in the enclosed photograph I obtained at Tintern Quarry in the Wye Valley.

The line on the right is the Chepstow to Monmouth single track and the engine —ex-G.W.R. pannier tank No. 9619—is collecting ballast wagons in the siding.

This quarry supplies stone ballast for the Western Region of British Railways.

I took the photograph while waiting for the two vans in the background to be recoupled, and on that date I rode in the brake van with the guard from Chepstow to Monmouth and back. The journey was, of course, made with an official railway permit. Passenger service closed on this line in January 1959.

STEPHEN J. DAY (Bristol)
(H.R.C. No. 200191)



Pannier Tank No. 9619 is seen above with its load of ballast wagons.



In the shade of the ombú tree the stamp enthusiasts of Buenos Aires (right) discuss their hobby.

A feature of the City of London School's Annual Exhibition was the comprehensive Hornby-Dublo display. Part of the layout is pictured below and grouped round are some of the enthusiastic members of the school's Railway Society.



STAMP MART IN A PARK

For many years I have been a constant reader of the *Meccano Magazine*. My son, who is 11 years old, is a Meccano fan, and I am devoted to stamp collecting. For your page *From Our Readers* I am going to write something that I think will prove of interest for stamp collectors and readers in general.

Here in Buenos Aires City is a park—its actual name is Park Rivadavia—which is a nice place with statues, trees and flowers, etc. One of the biggest trees there is an *ombú*, which is one of the most popular native trees and around which, every Sunday morning, lots of stamp collectors gather to exchange their duplicates. There are also traders and advanced collectors who also sell and buy stamps, but mainly the business is devoted to exchanging. The photograph shows a part of the area where these activities take place.

Does any reader of the *M.M.* know any other place similar to this? As far as I know, there is one in Paris and another in Barcelona.

CARLOS M. PEREZ (Buenos Aires)

Britain's First Commando Carrier—

(*Continued from page 193*)

extremely fit amphibious infantrymen, members of a Corps with 300 years of fighting tradition behind it. Among them will be found parachutists, cliff climbers, underwater swimmers and canoeists. The unit in which the Commandos serve is itself called a Commando. There are three other such units in existence at the present time. One is in England; the two others are abroad, at Malta and Aden. Each unit is organised and equipped to operate without vehicles if need be, and in the worst terrain. Each has its own medium machine guns, 3-inch mortars and Mobat anti-tank guns.

Probably the most versatile troops the country possesses, the Royal Marines are, as ever, marching with the times. First into the troop-carrying helicopter business, thanks to the forward thinking of the Royal Navy, they are showing once more how effective a contribution they can make to the strength of their parent Service. In the Commando Carrier this contribution is made by the Commandos in close collaboration with the ship's company and the helicopter squadron.

The three components in the ship all play an equal part and together form a powerful fighting entity in which strategic mobility marches hand in hand with tactical flexibility.

Baltimore's Railroad Museum—

(*Continued from page 199*)

The colourful insignia of virtually every railway company in the United States is displayed in a collection of names that quickens the pulse of train enthusiasts. There is the scarlet keystone of the Pennsylvania Line, and the square block of the Soo Line. There are, too, the flowing letters of the Delaware and Hudson.

Names redolent of early ventures of railroading in the Eastern States—the Bangor and Aroostook; Chesapeake and Ohio; Georgia and Florida, and the New York Central—are represented. There are reminders, too, of the names carried into the West, following the rails laid by Irish and Chinese labourers under constant threat of Indian attack—Union Pacific; Denver and Rio Grande; Texas Mexican; Chicago, Saint Paul, Minneapolis and Omaha, and the Atchison Topeka and Santa Fé.

All the drama of a fabulous era can be envisaged from these railroad-line crests, and to view them forms a fitting climax to any visit to Baltimore's Railroad Museum.

Pleasure Steamer "St. Tudno"—

(*Continued from page 202*)

was used as a mine-sweeping depot ship at Queen Pier, Sheppey, in the Nore Command.

The *St. Tudno* was released from her wartime service in March 1946 and was re-fitted by Fairfields between that month and the following June.

This popular vessel still operates on the Liverpool–North Wales run, and for those who are interested in distances, the trip from Liverpool Landing Stage to Llandudno via the Queen's Channel is 34 miles or, via the Rock Channel, 30 miles. To Menai Bridge the distance is 53 miles via the Queen's Channel and 49 miles via the Rock Channel.

She is fitted with warm lounges and an oak-panelled dining saloon, and there are also cafeterias, refreshment bars and a wireless room. There are also three private cabins. She is fitted with a bow rudder for handling in narrow waters, such as the Menai Straits, and as she steams easily along on her summertime journeys, down the sea lane which carries some of the biggest ships in the world and past the magical scenery of the North Wales coastline, she is a credit to her builders and to her owners.



"You're wasting your time, son, what did you say you call it—a Wheel?"

The Humber Hawk—

(*Continued from page 210*)

"khaki" product was "Old Faithful", the Snipe staff car used by Field Marshal Montgomery during the North African and Italian campaigns. In 1954 the War Department presented this car to Humber as testimony of the good service rendered by their vehicles in the war.

Since then, Humber prestige has been maintained by the Hawk Super Snipe and Pullman models, all of which have retained the two Humber essentials of quality and good performance. In 1952, the four-litre Super Snipe, fitted with a new o.h.v. "blue riband engine", was driven overland from London to Capetown in 13 days 9 hours—a record which still stands.

The current 2½ litre Humber Hawk is an outstanding vehicle, capable of over 90 m.p.h., with disc brakes as standard equipment. Three body styles are available, a beautifully appointed saloon, a limousine and a luxury estate car. Some British police forces use the Hawk saloon for patrol duty. A replica of one of these cars, complete with "police" sign and crew, is available in the Dinky Toys series.

Giant Tree-Crushers—

(*Continued from page 207*)

This relatively small cost is even more significant when the machine's performance is multiplied by, say, 10,000, representing that number of cleared acres. The saving, assuming the difference in costs per acre is only 5.50 dollars, becomes 55,000 dollars—a great deal of money in any currency!

Add to these savings the low maintenance costs of the tree-crusher—no tracks, friction clutches, transmissions, torque converters or mechanical linkages to maintain and service—and it can be seen that this massive machine should certainly play an increasingly vital role in land clearance schemes, whether it is required for agricultural use or merely to rip a right-of-way for new roads or railways.

B.R. PRE-APPRENTICE TRAINING SCHOOL

Work will shortly begin on the construction of a Pre-Apprentice Training School at York, in the North Eastern Region of British Railways.

To be built on a site on Poppleton Road in the extreme north west corner of the Carriage and Wagon Works, the new school will be under the control of the Carriage and Wagon Works Manager. It is intended to provide twelve months' pre-apprentice training for craft apprentices from all the technical departments in the York area, with a four months' basic workshop training for Engineering Students who are being trained to professional level.

Principal aims of the school will be to introduce the boy to new conditions and acquaint him with the need for adapting himself to a new environment; to give definite and systematic training in manual skill; to find the boy's natural aptitude in order to place him in a trade in which he is considered likely to be successful, and to give class instruction in allied subjects and so widen his field of knowledge. During their term at the school the boys will be given basic workshop experience.

About two-thirds of their time will be spent on practical work in a large and well-equipped workshop, with instructors drawn from British Railways' own staff. Theoretical work in class room and laboratory will constitute the remainder of the studies. Here lecturers will, in the main, be provided in association with the Local Education Authority.

It is planned to accommodate 60 boys at the school, with an intake of twenty new students at four-monthly intervals to coincide with the normal school-leaving periods. The building will be completed and ready for the first intake of students by the end of 1962.

Modern in design, the new Training School will have two wings (one a workshop and stores block, the other a two-storey teaching and amenity wing), linked at one end by an administrative unit containing accommodation for the school staff. Ancillary buildings consist of a basement boiler house and a cycle store.

Fireside Fun



"You must be a rotten teacher!"

The major despaired of making soldiers of any of his recruits, except one lad. When the time came for the company to be transferred, he summoned this lad to his office.

"I've been watching you," the major said genially, "and I hope the next time I see you, you'll be a second lieutenant."

"Thank you sir," stammered the flustered private, "and—the same to you, sir."

* * * *

Jack: How long have you worked on this job?

Jim: Ever since the boss threatened to sack me.

During a tour of the United States, an Englishman fell into conversation with a Texan on a train. The Texan embarked on a long and boring recitation of the wonders of the Lone Star State.

"Maybe you didn't realise it while you were going through my State," he said, "but all of Great Britain could fit into one corner of it."

"I dare say it could," said the Englishman, drily, "and wouldn't it do wonders for the place!"

* * * *

Teacher: Tommy, what are taxes?
Tommy: Little nails.

* * * *

The man fishing at the end of the pier had noticed the silent stranger observing him intently. Finally, the fisherman grumbled in annoyance, "Say, mister, you've been watching me fish for two hours! Why don't you try it yourself?"

With a blank look the stranger replied, "Not me, boy. I haven't the patience!"



"It's that "Make It Yourself Swimming Pool Kit" I sent for!"

"And there, my son, you have the story of your dad and the great world war!"

"Yes, daddy, but why did they need all those other soldiers?"

* * * *

The young husband wrote home from his new job, saying: "Made foreman—feather in my cap."

A few weeks later he wrote again, saying, "Made manager—another feather in my cap." After some weeks he wrote again, saying, "Sacked—send money for train fare."

His wife unfeelingly telegraphed back, "Use feathers and fly home."

* * * *

A motorist was charged in court recently for making an illegal turn. "I didn't want to turn, judge," he explained; "I wanted to go straight on, but then I saw a sign, 'No U TURN', so I did!"

* * * *

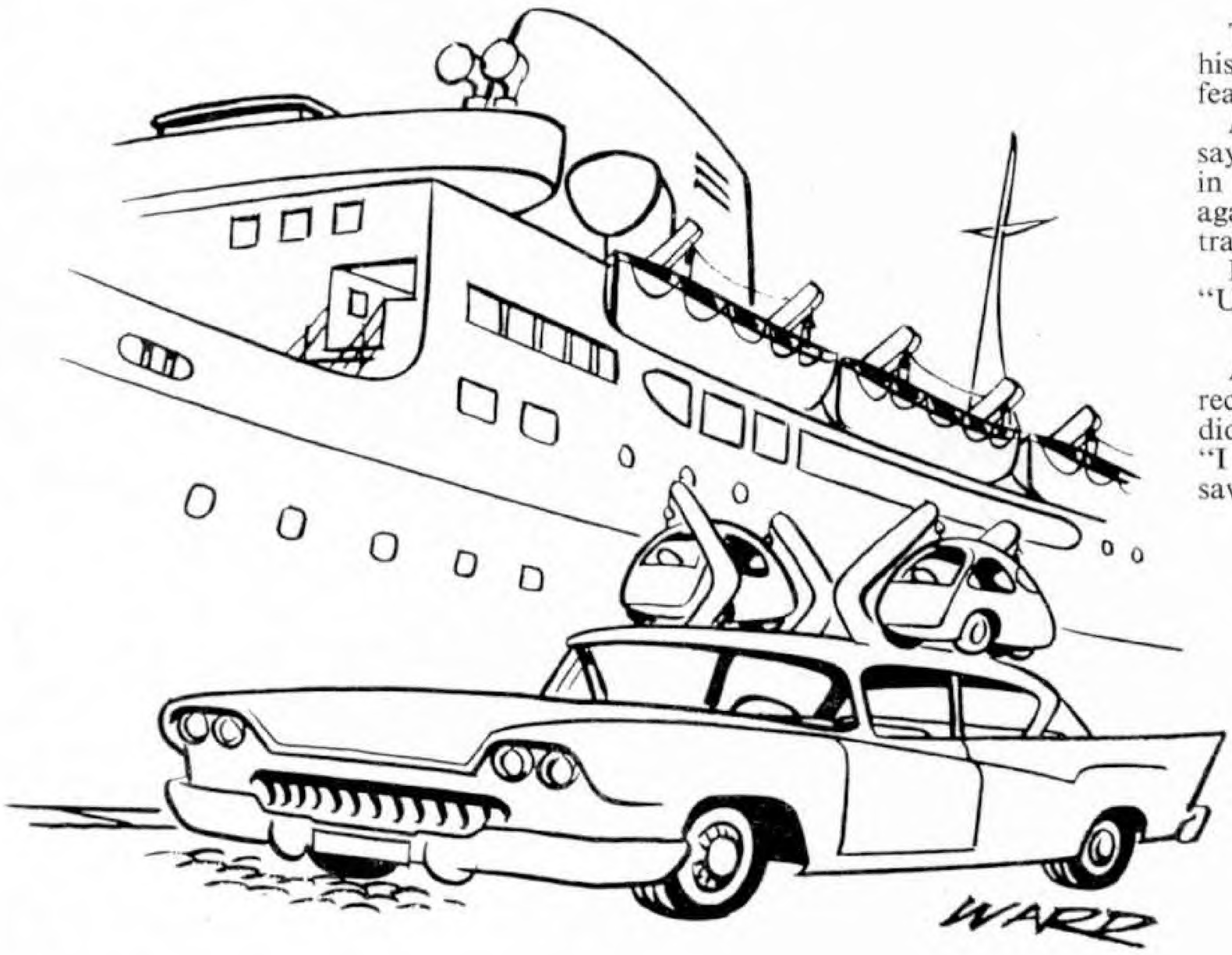
"Why have you had the word 'Shasta' painted on the bonnet of your car?"

"Oh, that's her nickname, because shasta have petrol, shasta have oil, shasta have something or the other all the time."

* * * *

A second-floor tenant called the party below and shouted, "If you don't stop playing that rotten saxophone I'll go crazy."

"I guess it's too late," came the reply, "I stopped an hour ago."

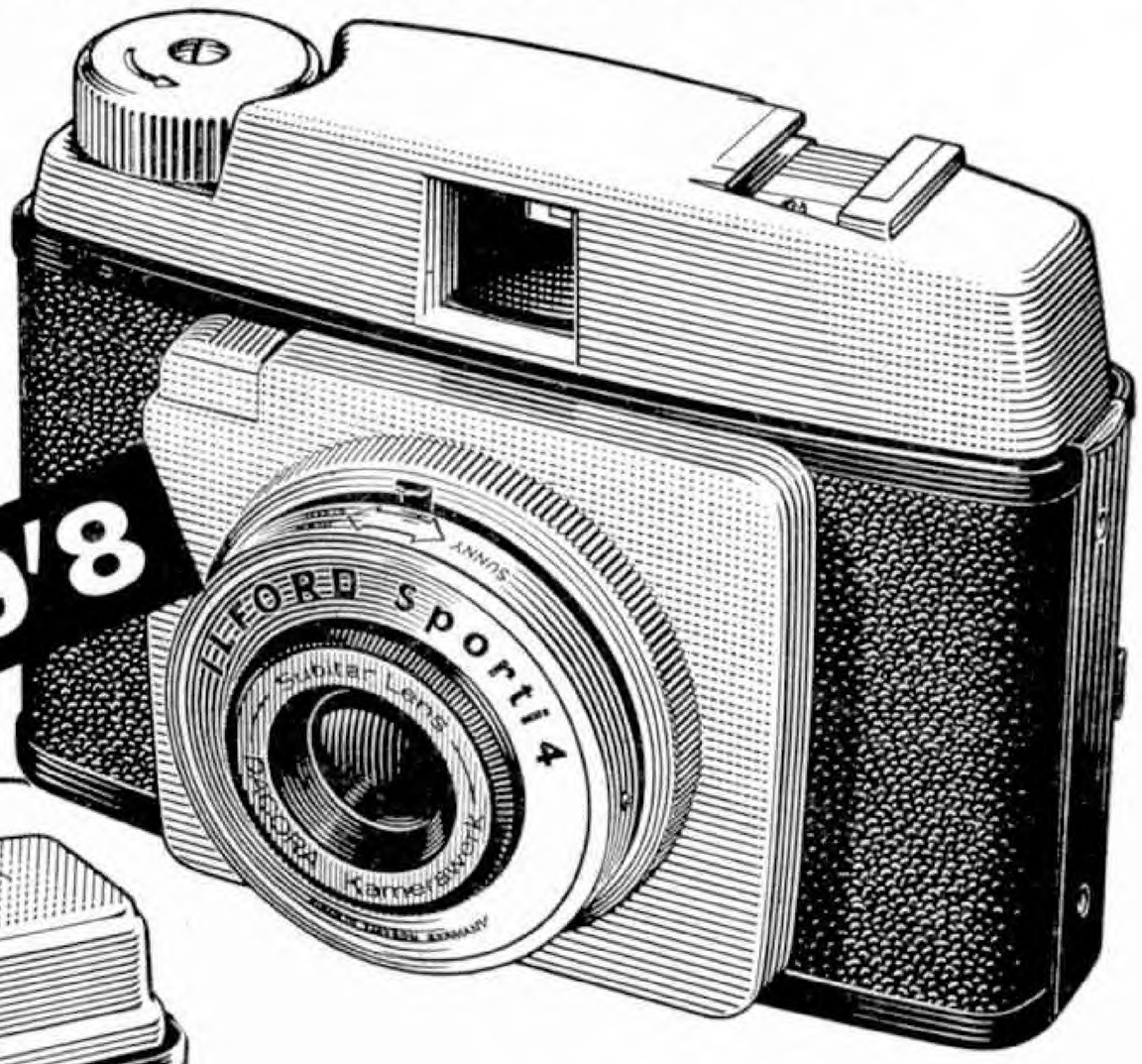


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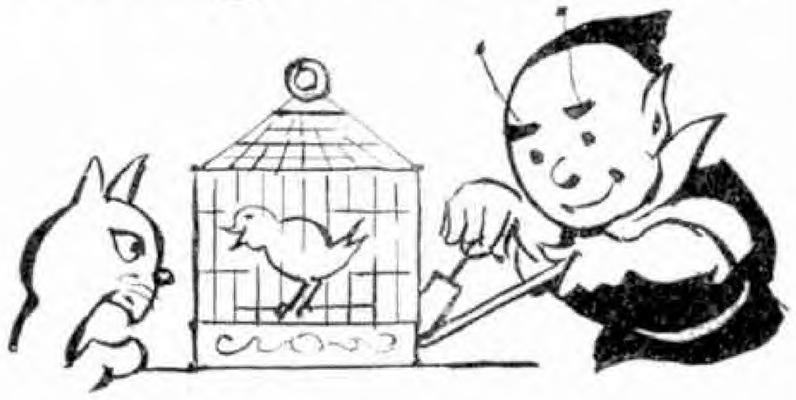
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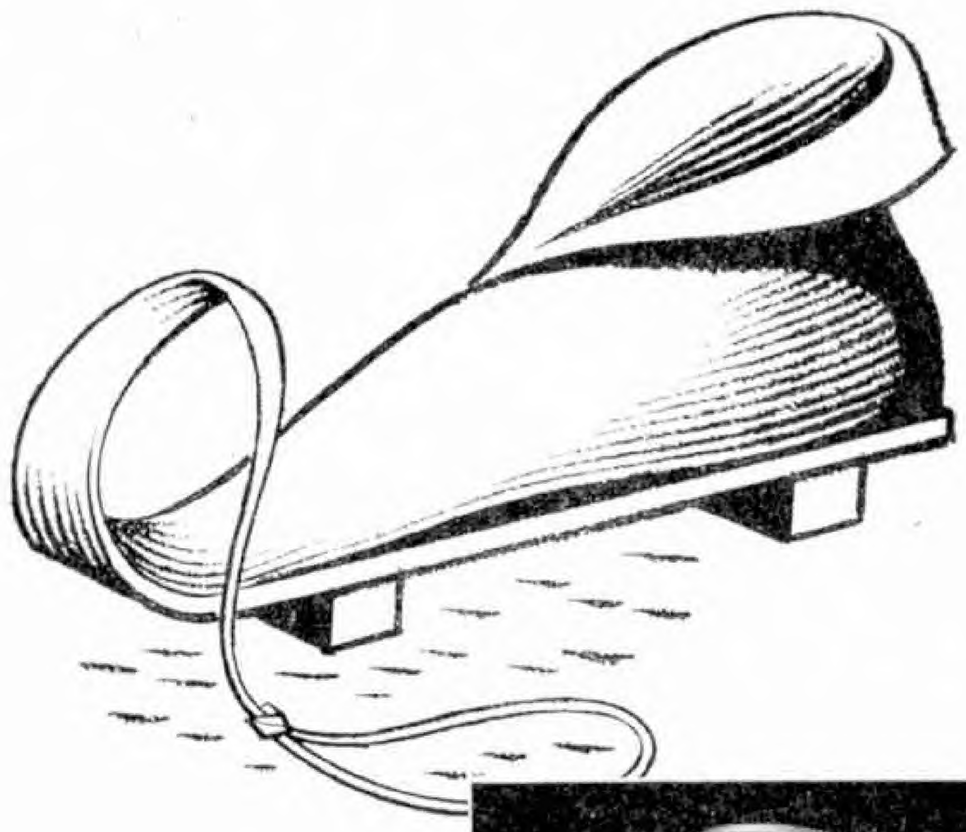
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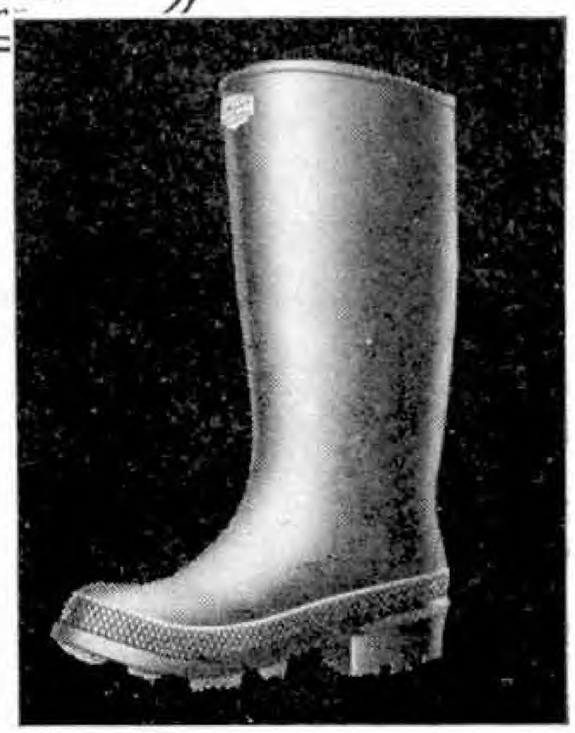
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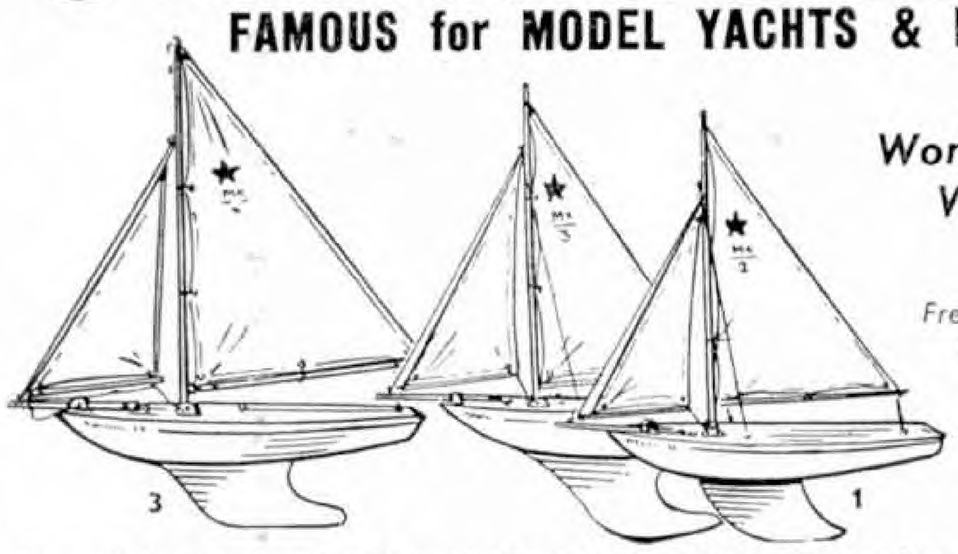
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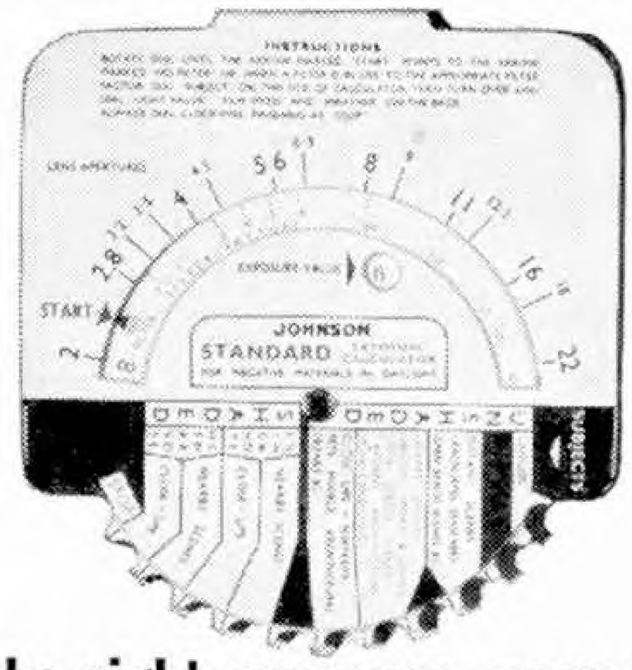
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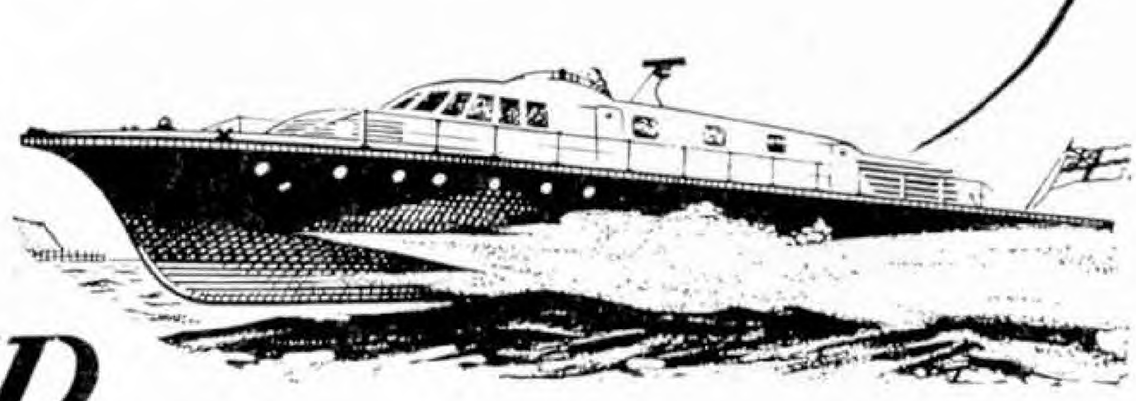
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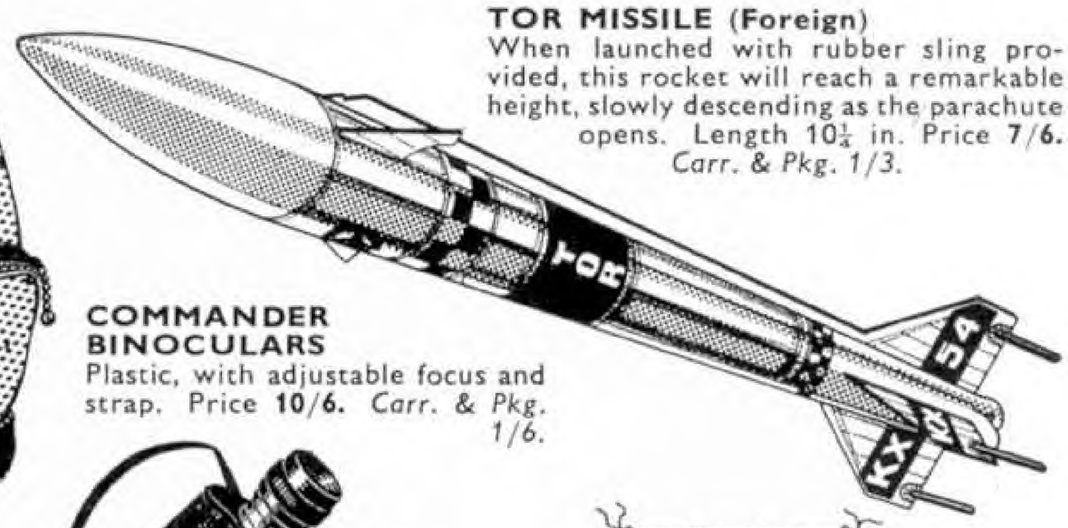
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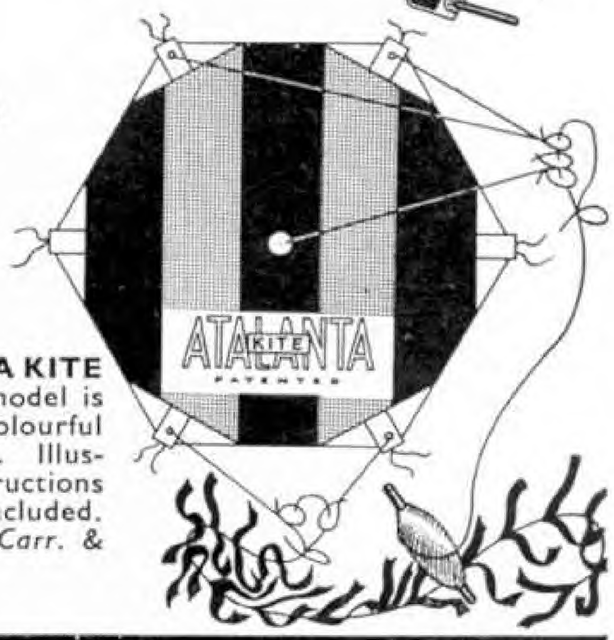
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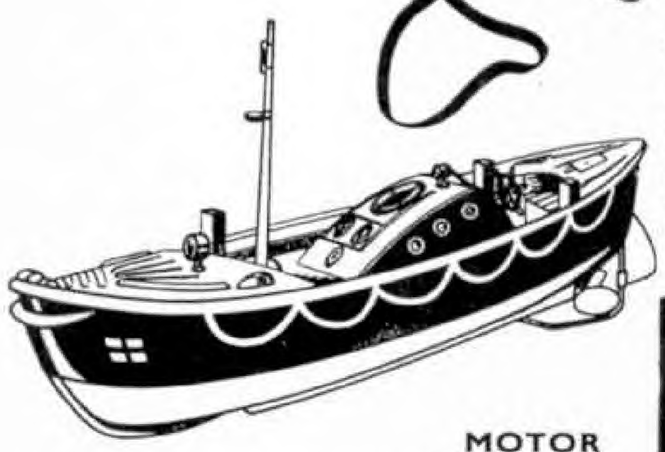


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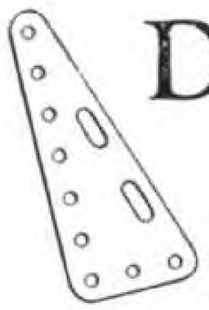
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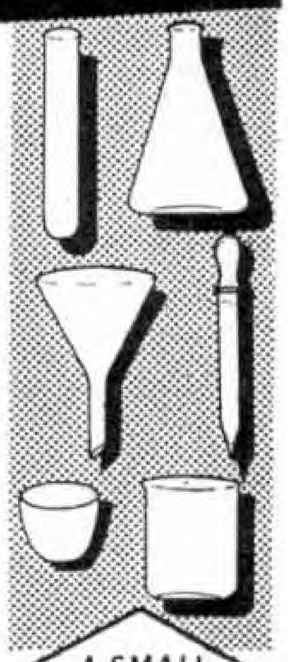
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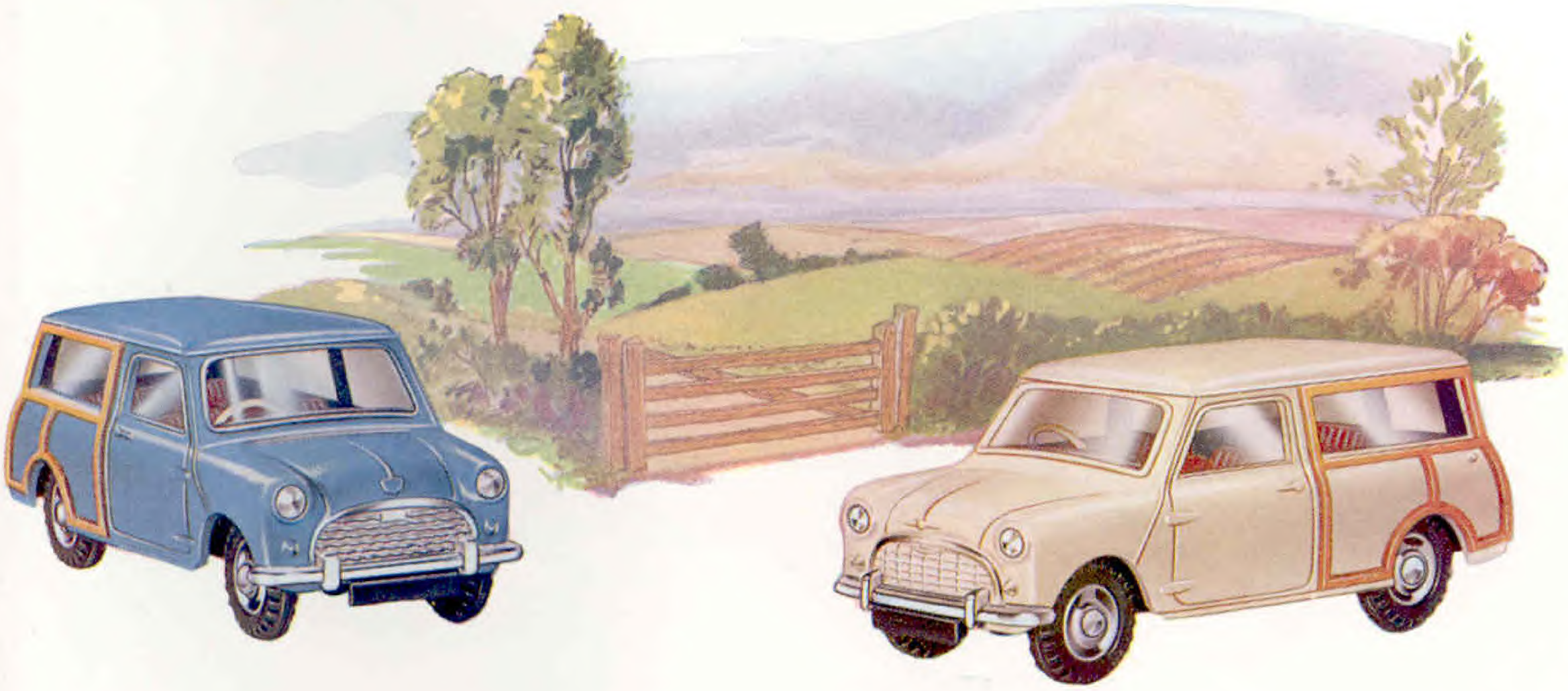
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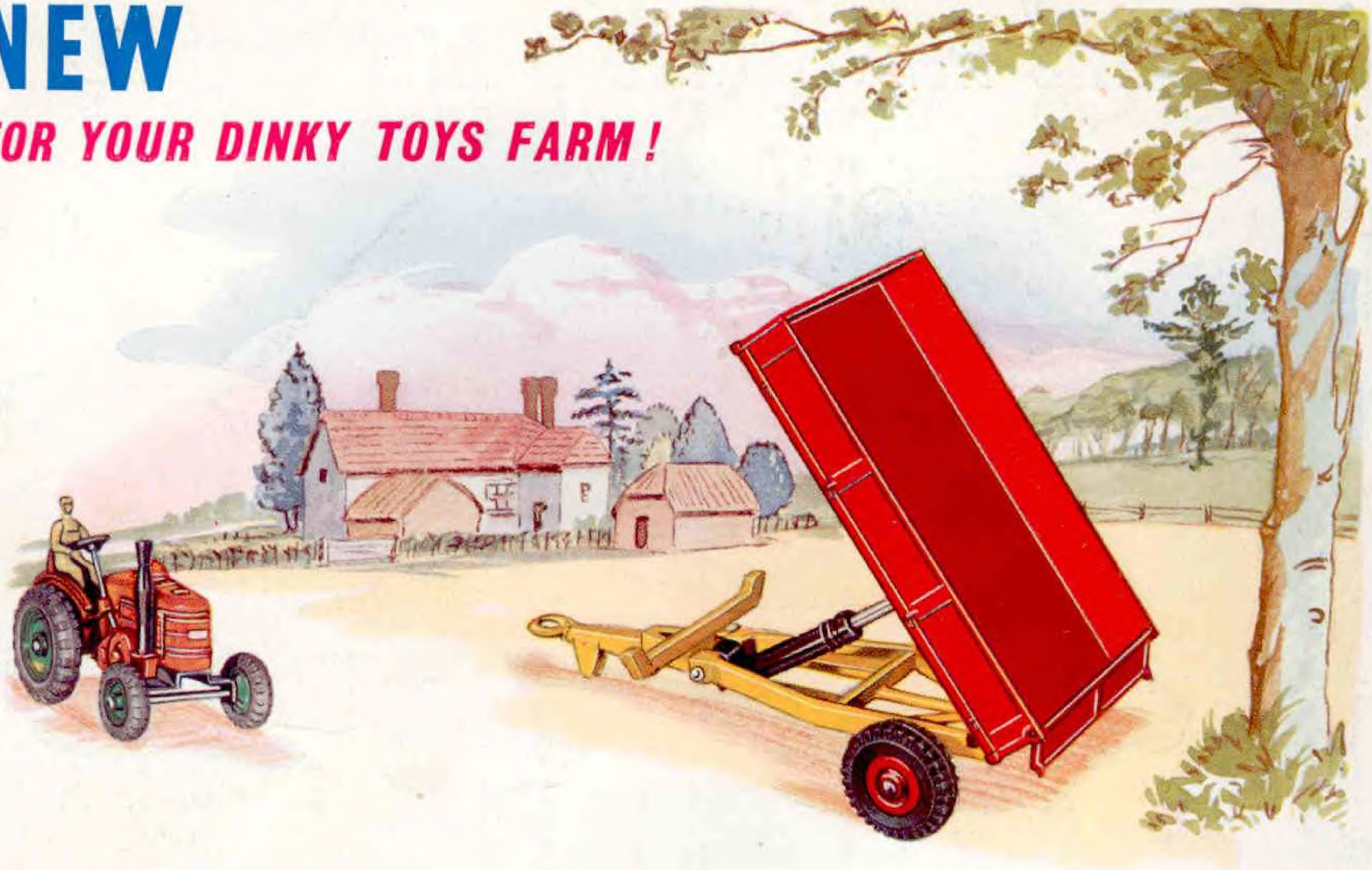
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